

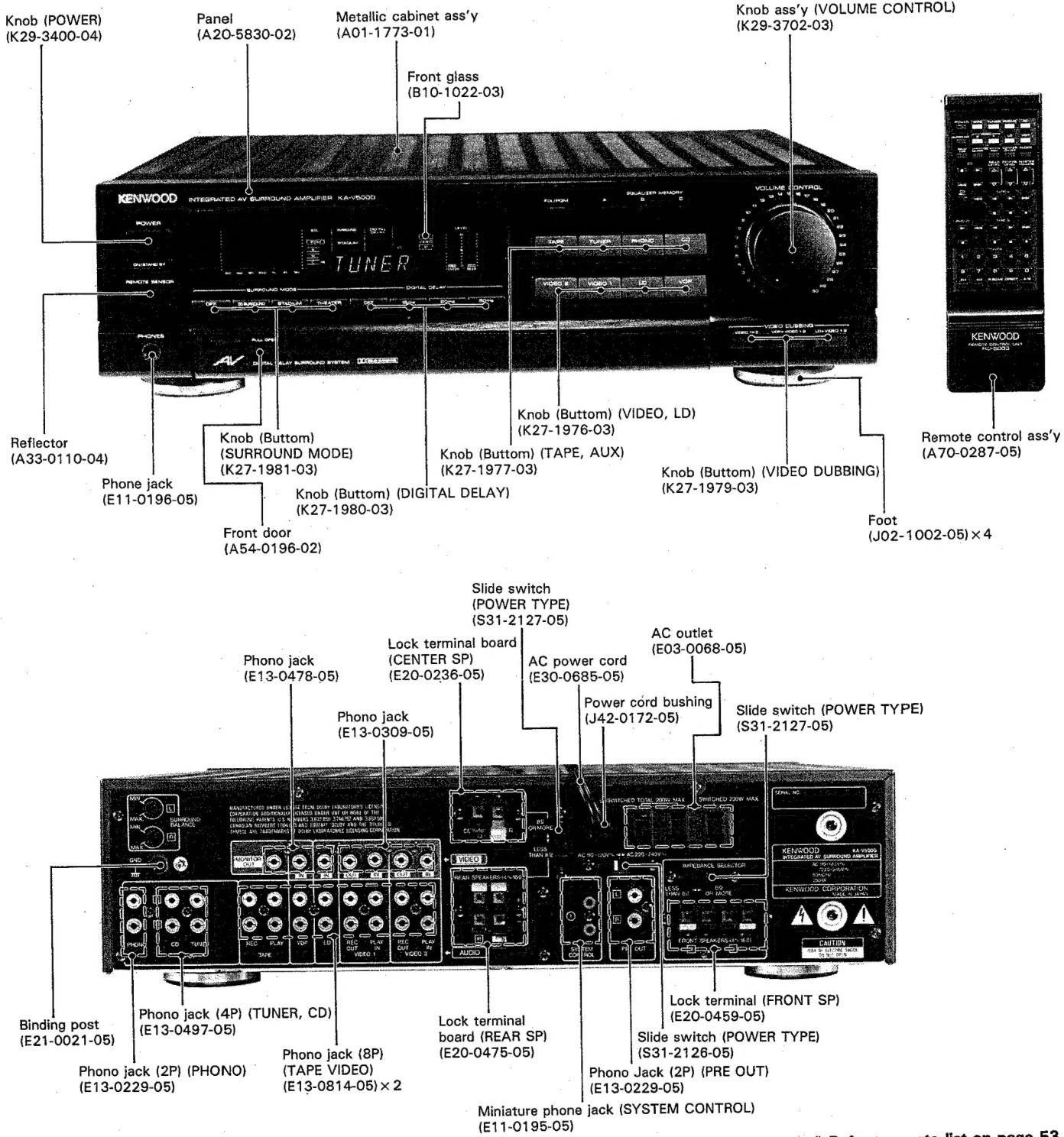
INTEGRATED AV SURROUND AMPLIFIER

KA-V5000

SERVICE MANUAL

KENWOOD

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B51-3670-00(T)588



* Refer to parts list on page 53.

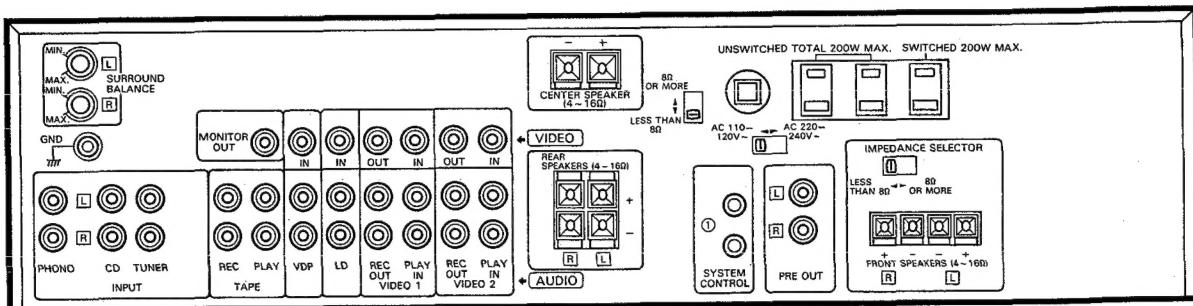
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CONTENTS/CONTROLS AND INDICATORS

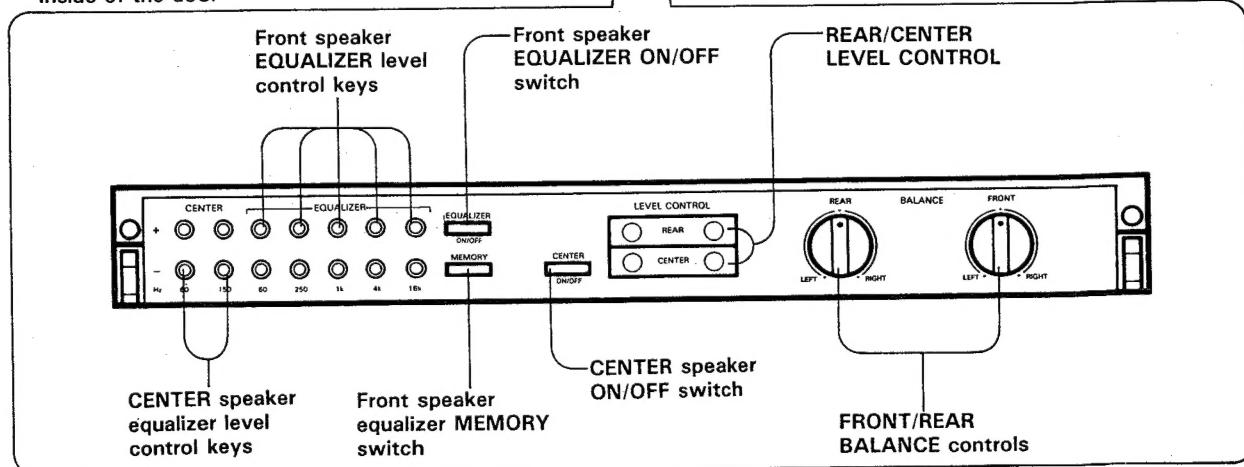
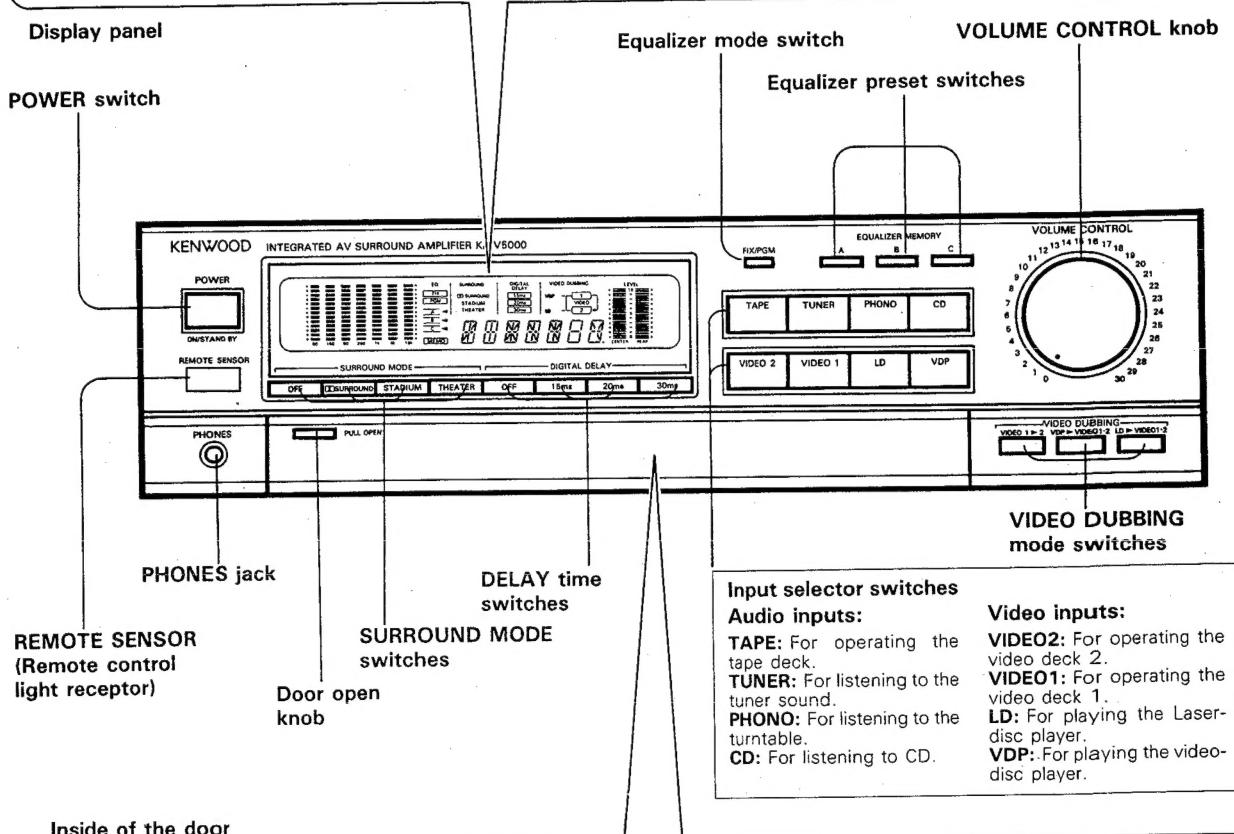
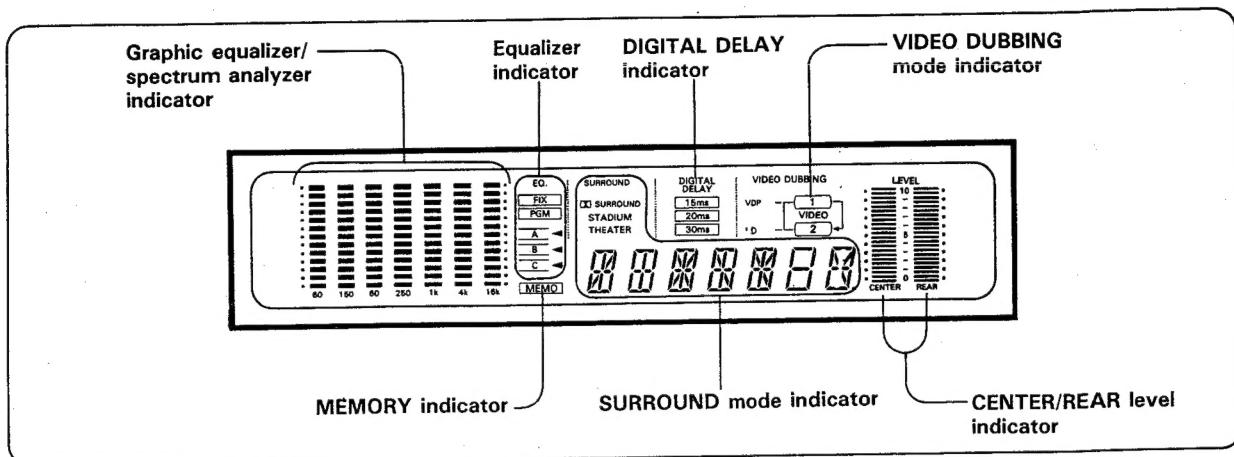
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CONTROLS AND INDICATORS



CONTROLS AND INDICATORS



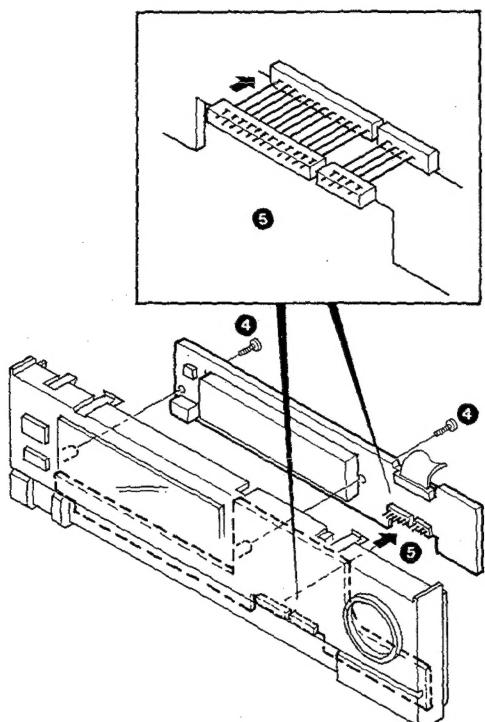
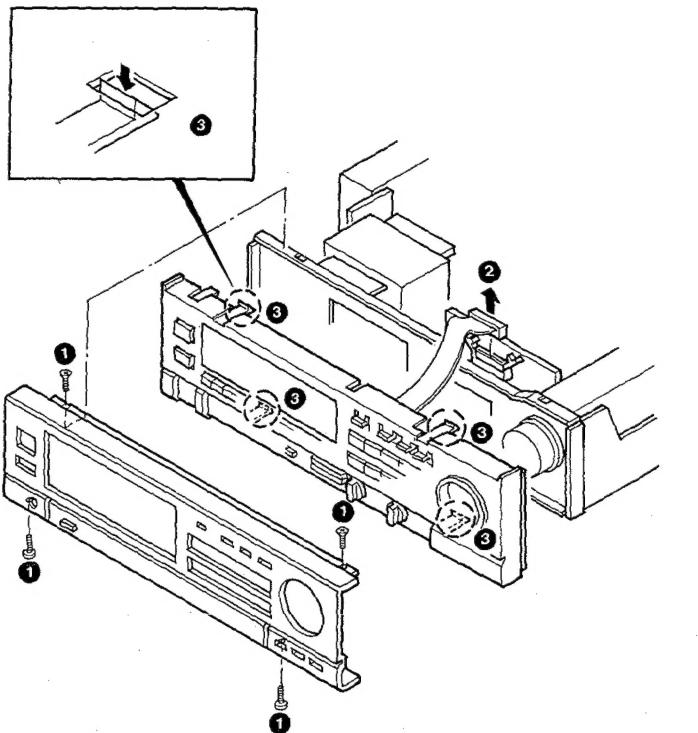
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DISASSEMBLY FOR REPAIR

• Removing the front section

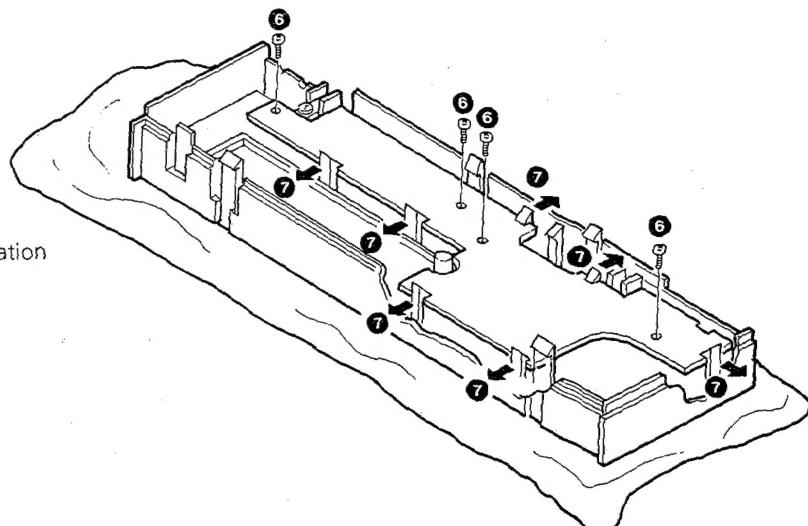
* Take out the case beforehand.

1. Remove the four screws (1), and detach the panel.
2. Disconnect the flat cable (2).
3. Undo the four catches (3), and detach the sub panel.



4. Remove the two screws (4).
5. Disconnect the connector, then take out the display section board (5).

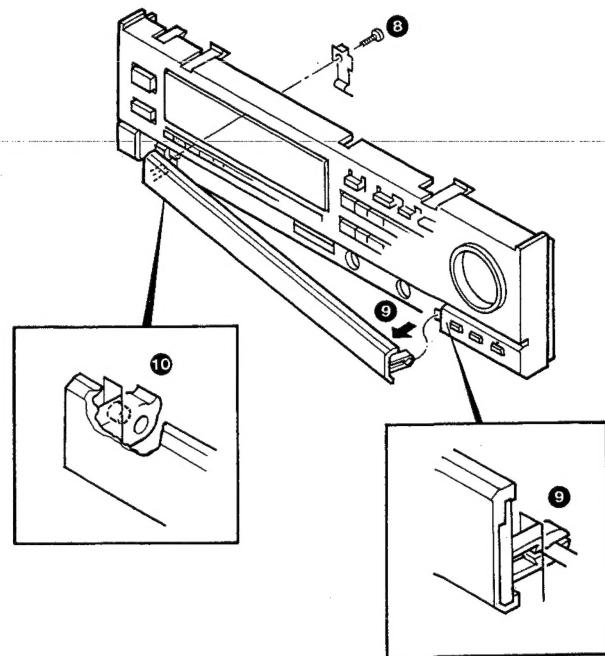
6. Remove the four screws (6).
7. Undo the seven catches (7), then take out the operation section board.



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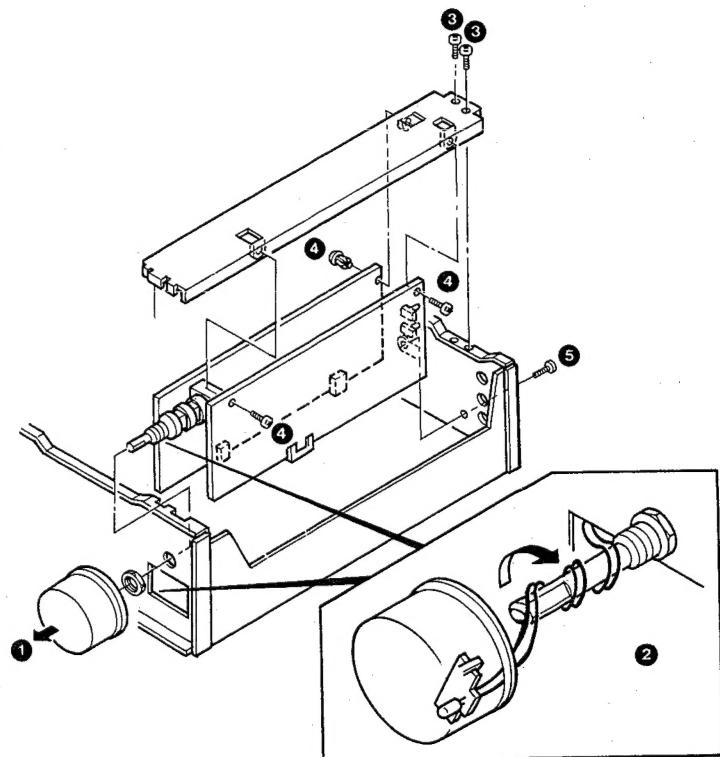
DISASSEMBLY FOR REPAIR

8. Remove the screw (8), and detach the flat spring.
9. First, release the right side of the door (9).
10. Then, release the left side of the door, and detach the door (10).



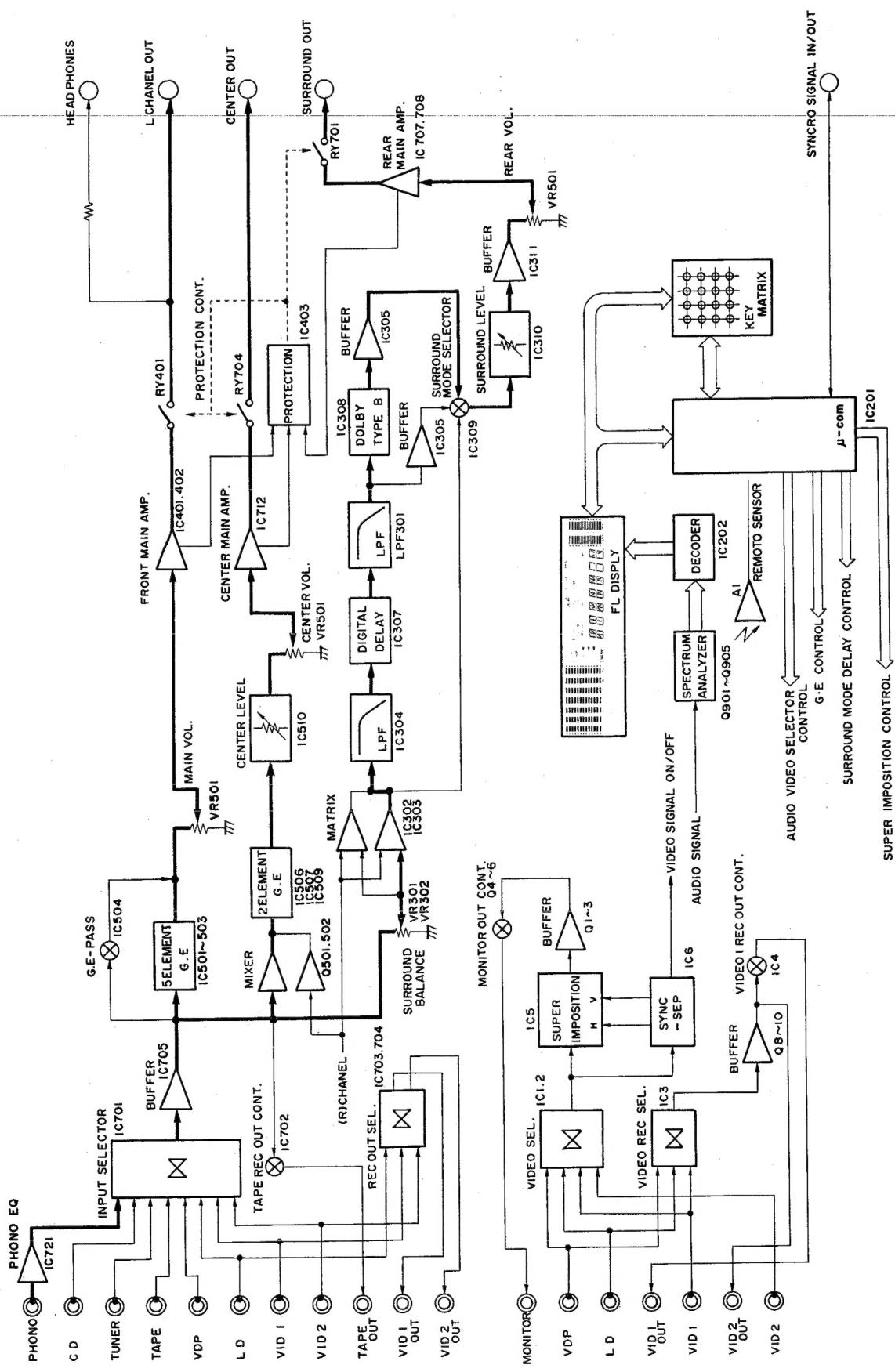
● Removing the volume board

1. Pull off the volume control knob (1).
Note: There is an LED put in inside the knob. Undo its catch and take out the LED board.
2. Handling method of lead wire of LED board (2).
As shown on the right, make three turns of the LED lead wire on the shaft, then attach the knob.
3. Remove the two screws (3) of the fixture.
4. Remove the one push rivet and two screws (4).
5. Remove the one screw (5) in the rear.
6. Take out the board.



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BLOCK DIAGRAM



CIRCUIT DESCRIPTION

DESCRIPTION OF COMPONENTS

Main amplifier unit (X07-2480-81)

Component	Name	Use/Function	Operation/Condition/Compatibility
IC301	NJM4558D-A	Buffer IC	Rear matrix buffer amplifier
IC302	NJM4558D-A	Buffer IC	Rear delay line mixer
IC303	NJM4558D-A	Buffer IC	Rear "STADIUM" mode amplifier
IC304	NJM082D	L.P.F.	Digital delay input L.P.F.
IC305	NJM4558D-A	Buffer IC	DOLBY SURROUND buffer amplifier
IC306	NJM4558D-A	Buffer IC	Electric volume (Rear level) buffer amplifier
IC307	YM3411	Digital delay IC	Delay circuit (15 ms, 20 ms, 30 ms)
IC308	NE645N	Dolby IC	Dolby circuit (Type-B)
IC309	NJU4052BD	Switching IC	SURROUND mode select switch
IC310	TC9154AP	Volume IC	Rear level adjustment
IC311	NJM4558D-A	Buffer IC	Rear amplifier output buffer
IC312	μ PC78L05J	AVR	+5 V
IC313	μ PC79L05J	AVR	-5 V
IC401	μ PC1298V	Driver IC	For power drive (Front L channel)
IC402	μ PC1298V	Driver IC	For power drive (Front R channel)
IC403	μ PC1237HA	Protection IC	All channel protection
IC404	μ PC7805HF	AVR	+5 V
Q301,302	2SA733(A)(Q,P)	Switching	IC309 control switching Tr. 2SA933S(Q,R)
Q303,304	DTC124EN	Switching	IC309 control switching Tr.
Q401,402	2SC2878(B)	Switching	Front amplifier muting
Q403,404	2SD414	Temperature compensation	Idle current adjustment for power amplifier
Q405	2SC3280*5	Power Tr.	Front power transistor (L channel)
Q406	2SC3280*5	Power Tr.	Front power transistor (R channel)
Q407	2SA1301*5	Power Tr.	Front power transistor (L channel)
Q408	2SA1301*5	Power Tr.	Front power transistor (R channel)
Q409,410	2SC2631(R,S)	Over current detector	For protection circuit (Front amplifier)
Q411	2SA992(F,E)	Over current detector	For protection circuit (Front amplifier)
Q413	2SC1740S(Q,R)	Switching	Relay drive for AC OUTLET 2SC945(A)(Q,P)
Q414	2SD1266(Q,P)	Switching	Relay drive for AC OUTLET
Q415	2SB941(Q,P)	AVR	-30 V

Audio unit (X09-2890-81)

Component	Name	Use/Function	Operation/Condition/Compatibility
IC701	TC9163N	Selector switch	Audio input selector
IC702	LC4066BH	Switching IC	TAPE REC enable switch
IC703	LC4066BH	Switching IC	Audio REC OUT selector (L channel)
IC704	LC4066BH	Switching IC	Audio REC OUT selector (R channel)
IC705	NJM4558D-A	Buffer amplifier	
IC706	μ PD74HC239C	Switching IC	For video selector control
IC707	μ PC1225H	Power amplifier	Rear main amplifier driver (R)
IC708	μ PC1225H	Power amplifier	Rear main amplifier driver (L)
IC709	μ PC7812HF	AVR	+12 V
IC710	μ PC7815HF	AVR	+15 V
IC711	μ PC7915HF	AVR	-15 V

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CIRCUIT DESCRIPTION

Component	Name	Use/Function	Operation/Condition/Compatibility	
IC712	μ PC1225H	Power amplifier	Center channel amplifier driver	
IC713	NJM4558D-A	Buffer IC	CD input buffer	
IC714	NJM4558D-A	Buffer IC	TUNER input buffer	
IC716	NJM4558D-A	Buffer IC	TAPE input buffer	
IC717	NJM4558D-A	Buffer IC	VDP input buffer	
IC718	NJM4558D-A	Buffer IC	LD input buffer	
IC719	NJM4558D-A	Buffer IC	VIDEO1 input buffer	
IC720	NJM4558D-A	Buffer IC	VIDEO2 input buffer	
IC721	NJM4558D-A	Buffer IC	PHONO EQ input buffer	
Q701	DTA114ES	Switching Tr.	For IC702 control	
Q702	2SA733(A)(Q,P)	Switching Tr.	For IC703, 704 control	2SA933S(Q,R)
Q703	DTC124EN	Switching Tr.	For IC702 control	
Q704	DTC124EN	Switching Tr.	For IC703, 704 control	
Q705	DTC124EN	Switching Tr.	For IC702 control	
Q706~708	DTC124EN	Switching Tr.	For IC703, 704 control	
Q709	DTA114ES	Switching Tr.	For IC703, 704 control	
Q710	2SA733(A)(Q,P)	Switching Tr.	For IC703, 704 control	2SA933S(Q,R)
Q711,712	2SC2878(B)	Mute	Rear amplifier muting Tr.	
Q713,714	2SD414	Temperature compensation	Rear amplifier idle current adjustment	
Q715,716	2SD613*1	Power Tr.	For rear amplifier power transistor	
Q717,718	2SB633*1	Power Tr.	For rear amplifier power transistor	
Q719,720	2SC1845(F,E)	Over current detector	For protection circuit detector	
Q721	2SA733(A)(Q,P)	Switching Tr.	Mute control	2SA933S(Q,R)
Q722	DTC124EN	Switching Tr.	Mute control	
Q723	2SC2878(B)	Mute	Center amplifier mute transistor	
Q724	2SD414	Temperature compensation	For center amplifier idle adjustment	
Q725	2SD613*1	Power Tr.	For center amplifier power transistor	
Q726	2SB633*1	Power Tr.	For center amplifier power transistor	
Q727	2SC1845(F,E)	Over current detector	For protection circuit detector	

Video control unit (X14-2490-81)

Component	Name	Use/Function	Operation/Condition/Compatibility
IC1	TA7348P	Selector IC	VIDEO signal selector
IC2	TA7347P	Selector IC	VIDEO signal selector
IC3	TA7348P	Selector IC	VIDEO REC OUT selector
IC4	LA7019	Switching IC	VIDEO1 REC OUT enable switch
IC5	MB88323A-K2	Super impose IC	MB88323A-K1
IC6	LVA516	Sync. separation IC	V-sync, H-sync
IC501	M5227P	G.E. amplifier	L channel amplifier (60 Hz-16 kHz)
IC502	M5227P	G.E. amplifier	R channel amplifier (60 Hz-16 kHz)
IC503	LC7522	Electric volume	G.E. control
IC504	LC4066BH	Analog switch	G.E.-pass switch
IC505	LB1630	Driver	Motor drive (For volume control)
IC506	NJM4558D-A	G.E. amplifier	Center channel amplifier (60 Hz, 150 Hz)
IC507	NJM4558D-A	Buffer	Center G.E. buffer
IC508	NJM4558D-A	Buffer	Electric volume buffer

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CIRCUIT DESCRIPTION

Component	Name	Use/Function	Operation/Condition/Compatibility
IC509	TC9170AP	Electric volume	Center G.E. control
IC510	TC9154AP	Electric volume	Center level adjustment
IC511	NJM4558D-A	Buffer	For front signal
IC512	μ PC78L06J	AVR	+ 6 V
IC901	NJM4558D-A	BPF	For spectrum analyzer display (60Hz, 250Hz)
IC902	NJM4558D-A	Buffer	Spectrum analyzer display amplifier
IC903	NJM4558D-A	BPF	For spectrum analyzer display (1KHz, 4KHz)
IC904	NJM4558D-A	BPF	For spectrum analyzer display (16KHz)
IC905	NJM4558D-A	BPF	For spectrum analyzer display (60Hz, 150Hz)
Q906	TA78L006AP	AVR	+ 6 V (V _{REF})
Q1~3	2SC1740S(Q,R)	Video amplifier	Monitor output buffer
Q4	2SC1740S(Q,R)	Switch Tr.	Video signal ON/OFF
Q5	2SA733(A)(Q,P)	Switch Tr.	Video signal ON/OFF
Q6	2SC1740S(Q,R)	Switch Tr.	Video signal ON/OFF
Q7	2SC1740S(Q,R)	Switch Tr.	For IC4 control
Q8~10	2SC1740S(Q,R)	Video amplifier	Video REC OUT buffer
Q11	2SA733(A)(Q,P)	Switch Tr.	For IC4 control
Q12	2SC1740S(Q,R)	Buffer	Video REC OUT buffer
Q13	2SC1740S(Q,R)	Buffer	Monitor out buffer
Q14	2SK364(GR,BL)	Buffer	Monitor out buffer
Q15	2SC1740S(Q,R)	Detector	V-sync.
Q501,502	2SC1740S(Q,R)	Buffer	Center channel mixer
Q503	2SA733A(Q,P)	Switch Tr.	G.E. ON/OFF control
Q504,505	DTC124EN	Switch Tr.	G.E. ON/OFF control
Q506,507	2SC1740S(Q,R)	Flip-Flop	LED winker (For volume knob)
Q903,904	2SC1740S(Q,R)	Buffer	L, R channel mixer
			2SC945(A)(Q,P)

Display unit (X25-3610-81)

Ref. No.	Name	Use/Function	Operation/Condition/Compatibility
IC201	μ PD75206CW-104	Microprocessor	
IC202	LC7565	Decoder	For spectrum analyzer/G.E. display
IC203	PST529C	Reset	For IC201 reset
IC204	TC74HC123P	Reset	For video signal reset
Q201	2SC1740S(Q,R)	Switch	For reset signal inverter
Q202	2SD882(Q,P)	Reset switch	For FL display (- 30 V reset circuit)
Q203	2SC1740S(Q,R)	Reset switch	For FL display (- 30 V reset circuit)
Q204	2SA733(A)(Q,P)	Reset switch	For FL display (- 30 V reset circuit)
Q205	2SA992(F,E)	Reset switch	For FL display (- 30 V reset circuit)

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CIRCUIT DESCRIPTION

IC6: LVA516 (X14-2590-81) SYNC SEPARATION

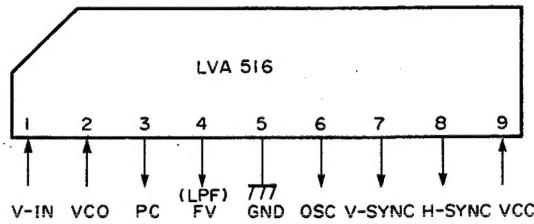
Outline:

When the video signal is input to pin 1 (V-IN), the VCO that is performing free-run oscillation (around 15 kHz) inside is locked with the horizontal sync signal (15.73 kHz) of the input video signal by a PLL circuit.

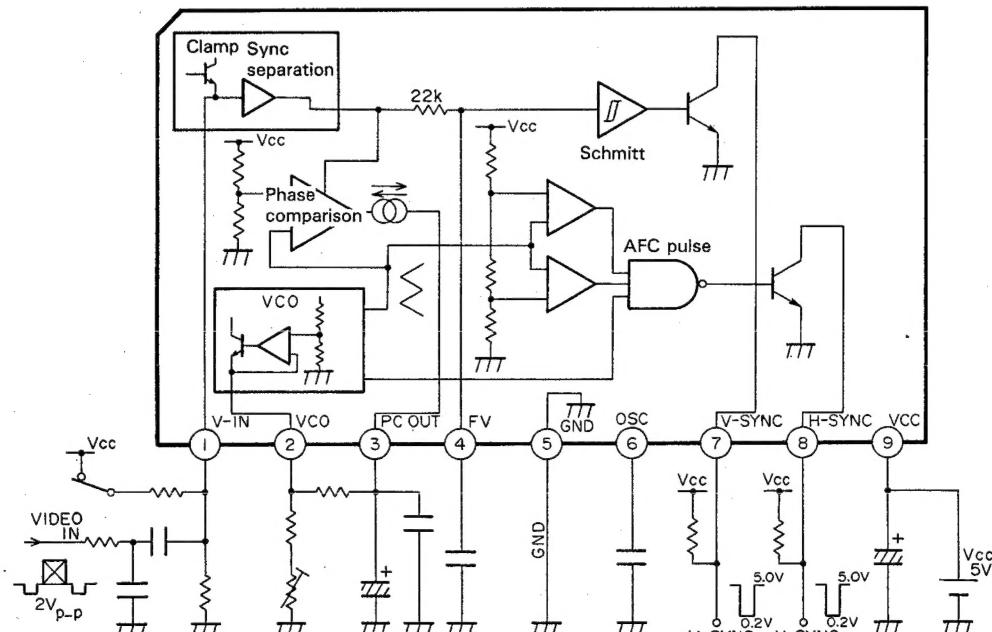
At this time, when the oscillation frequency of the VCO is away around ± 1 kHz from 15.73 kHz, the VCO cannot be satisfactorily locked with the input, so that there occurs disturbed display of characters (superimposed) with unstable sync.

From pins 7 (V-SYNC) and 8 (H-SYNC) are output respectively the vertical sync and horizontal sync signals, which are used as the reference sync signal for the superimpose IC. In addition, V-SYNC judges between the presence and absence of the video signal converted to DC to inform the judgement to the microprocessor. When the judgement is that no video signal exists, the superimpose IC produces a blue background (blue screen) inside.

Terminal connection diagram



Block diagram:



* Free-run frequency is adjusted by VR1 with SW1 ON. (15.73 kHz)

Pin functions

Pin No.	Name	I/O	Function
1	VIN	I	VIDEO INPUT
2	VCO	I	SYNC VCO. (15.73 kHz)
3	PC	O	PLL PHASE COMPARATOR OUT
4	FV	O	V-SYNC CHECK
5	GND	—	
6	OSC	O	TIMING CLOCK
7	V-SYNC	O	V-SYNC OUT
8	H-SYNC	O	H-SYNC OUT
9	Vcc	I	+5 V

CIRCUIT DESCRIPTION

IC5: MB88323A (X14-2590-81)

SUPER IMPOSE IC

Outline

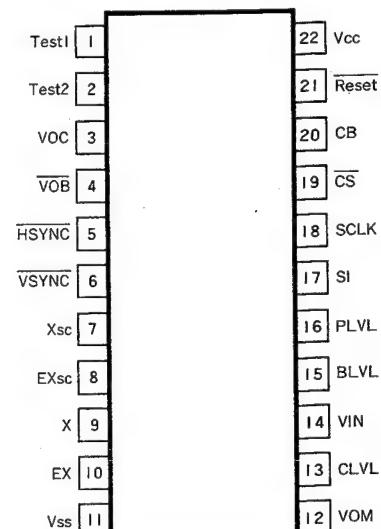
The MB88323A-K2 is a display-controller CMOS LSI for use in displaying characters and patterns on a TV display, and is based on microprocessor control.

The number of display characters is 20 columns x 9 lines. The LSI incorporates a character generator ROM for 64 characters, and is capable of displaying alphanumerics and special characters as well as Japanese letters such as Kanji, Hiragana and Katakana. The LSI also incorporates a programmable character generator RAM for 62 characters. By putting character patterns in the RAM, a versatile display is made possible, including a semi-graphics display consisting of linked character patterns, as well as the alphanumerics, special characters, and Japanese Kanji, Hiragana and Katakana letters.

The dot interpolation facility makes it possible to display smooth oblique lines, and the character size can be expanded in 8-bit increments such as 16 x 16 dots.

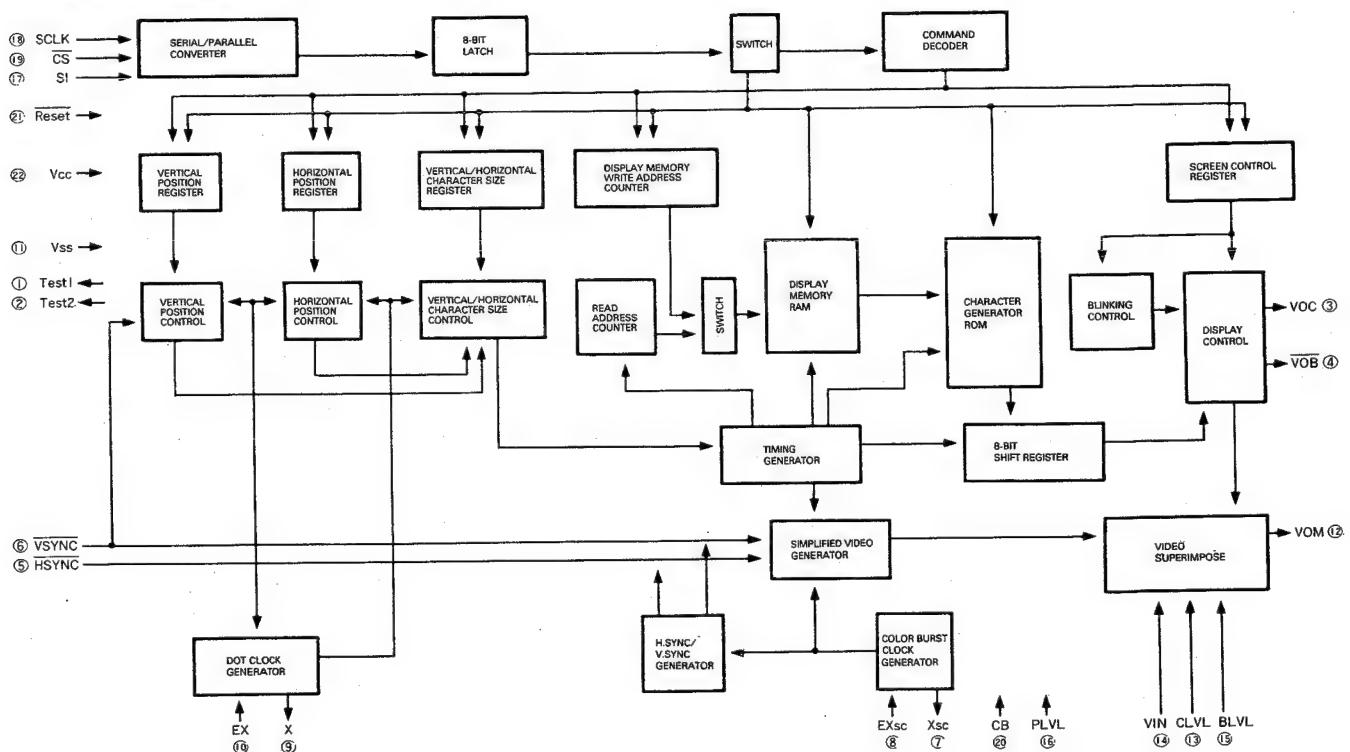
The display output can be superimposed on the TV video signal or VTR output signal, and the superimposed picture can also be recorded onto a VTR.

Pin Configuration



(Top View)

Internal Block Diagram



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CIRCUIT DESCRIPTION

Explanation of Pins

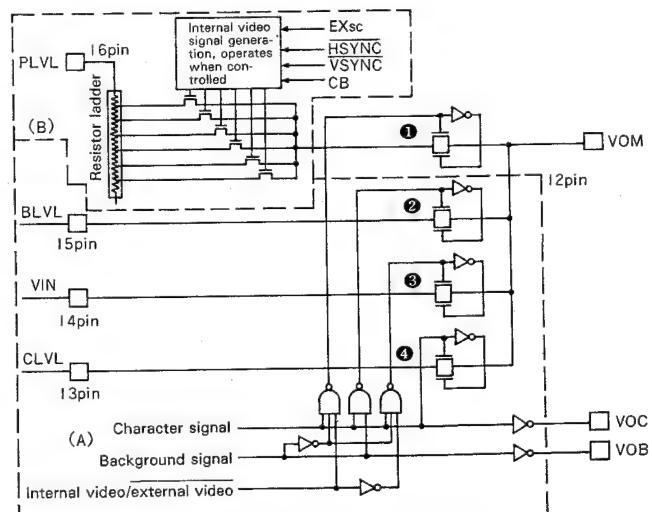
Pin Name	Pin No.	Input/ Output	Function
EXtal Xtal	10 9	Input Output	Terminals for connecting the external dot clock generator
Reset	21	Input	TVDC reset input terminal. The TVDC operation is initialized when Reset is at a "Low" level. When power is turned ON, the V sync signal must be input to the VSYNC terminal. This is a hysteresis input.
HSYNC	5	Input	Horizontal sync signal input terminal. A hysteresis input.
VSYNC	6	Input	Vertical sync signal input terminal. A hysteresis input.
CS	19	Input	Chip Select terminal, which is set to a "Low" level when a serial transfer is required. A hysteresis input.
SCLK	18	Input	Serial clock input terminal, for use in a serial transfer. A hysteresis input.
SI	17	Input	Display control data input terminal. A hysteresis input.
VIN	14	Input	Video signal input terminal. (Analog input)
CLVL	13	Input	Character level input terminal. (Analog input)
BLVL	15	Input	Edge and background level input terminal. (Analog input)
VOM	12	Output	Output terminal for the superimposed signal of the video signal, character signal and edge or background signal. (Analog output).
VOC	3	Output	Character signal output terminal.
VOB	4	Output	Edge or background signal output terminal.
EXsc Xsc	8 7	Input Output	Terminals for connecting the external color burst clock generator (7.15909 MHz or 14.31818 MHz). Also used for the internal sync signal generation in Video mode 2.
CB	20	Input	Used to select whether the color burst is to be present or not when Video mode 2 is set.
PLVL	16	Input	Pedestal level input terminal. When Video mode 2 is set, the pedestal level of the internally-generated simplified video signal shall be adjusted to that of the external video signal.
Vcc	22	Input	+5V external power supply terminal.
Vss	11	Input	GND.
Test 1 Test 2	1 2	Output	Chip testing terminals, which are usually open.

When superimposing characters on external video signal

The video signal which is input from pin 14 of the IC is output to pin 12 (VOM) by way of an analog switch (③). Thus, analog switch (③) turns OFF at the position where characters are superimposed and analog switch (②) turns ON.

At this time, the voltage at pin 15 is output to pin 12 (VOM). If this voltage level is low, a black signal appears. Subsequently, analog switch (②) turns OFF and analog switch (④) turns ON. Thus, as pin 13 is higher in voltage level than pin 15, a nearly white signal appears.

Like this, by the ON/OFF operation of analog switches (②), (③) and (④), signals of two levels are superimposed on the video signal. (One level is for character signal and the other level is for character fringe signal.)

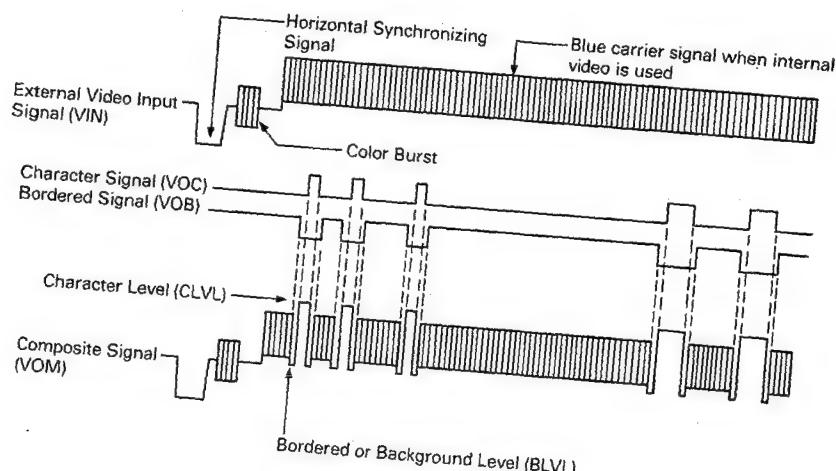


MB88323A-K2 Analog Switches

CIRCUIT DESCRIPTION

When generating internal video signals

When no video signal is input, the IC generates video signals to output them. In this case, analog switch (1) is ON and others are OFF. Internal video signals are generated by dividing 7.15909 MHz (twice the frequency of color subcarrier).

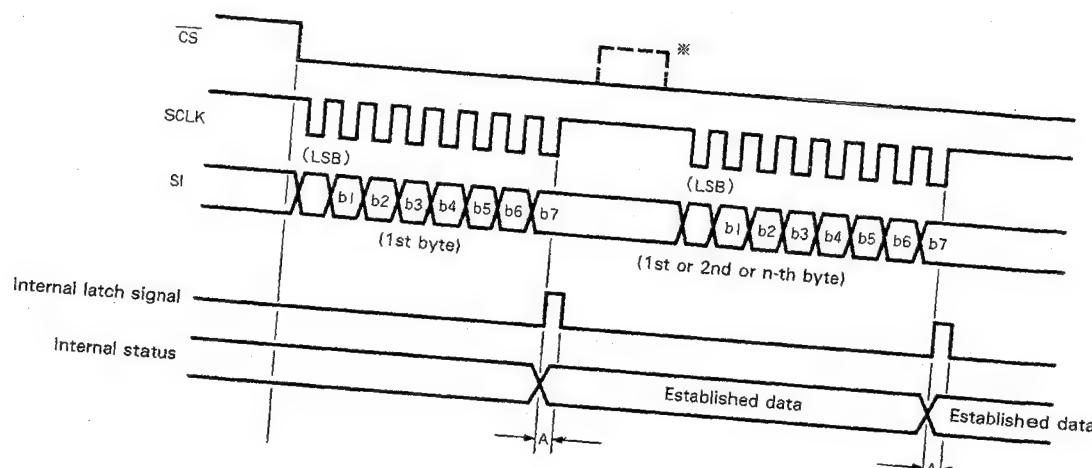


Data transfer system and command write format

The display control commands and data are written by means of 8-bit serial transfer.

For the serial transfer, the \overline{CS} terminal should be set to Low. While the \overline{CS} terminal is Low, data of any byte in the command, i.e. the 1st byte, 2nd byte, ... to the n-th byte, can be transferred.

Each unit of data consists of 8 bits, which are shifted in sequence from the LSB (Least Significant Bit) and input to the SI terminal. As shown in Fig. 5, data is input and shifted at the positive-going edge of the shift clock input at the SCLK terminal. The transferred data is latched internally at the positive-going edge of the shift clock for the 8th bit.



* For byte synchronization, the \overline{CS} terminal can be returned to High temporarily then turned Low again in the middle of serial data transfer.

Serial Transfer Timing

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CIRCUIT DESCRIPTION

IC307: YM3411 (X07-2480-81) DIGITAL DELAY IC

Outline

YM3411 is a 16-pin DIP CMOS IC with high-grade digital surround function making the best of digital audio processing technology.

The internal digital processing is of 14-bit in a floating-point system.

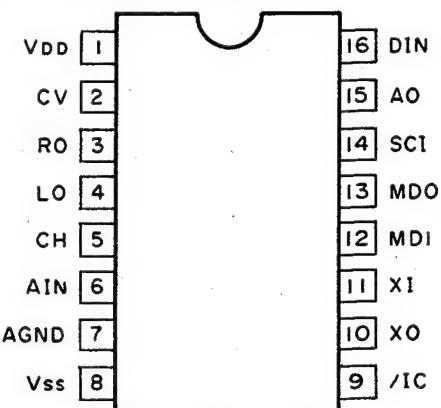
The 1-channel analog signal is converted into a digital form by a built-in A/D converter. Then, for providing the surround effect according to the mode, the 2-channel digital signals subjected to the delay process making use of a digital audio processing and a built-in RAM are output converted into analog forms by built-in D/A converters. The sampling rate of the A/D conversion is 49.7 kHz; That of the D/A conversions, subject to 2x over-sampling, is 99.4 kHz.

There are available four modes. Mode setting is made by 2-pin "H"/"L" combination.

Out of these four modes, one is a manual mode, in which it is possible to control the delay, frequency response and output level by inputting data from an external means such as a personal computer, etc.

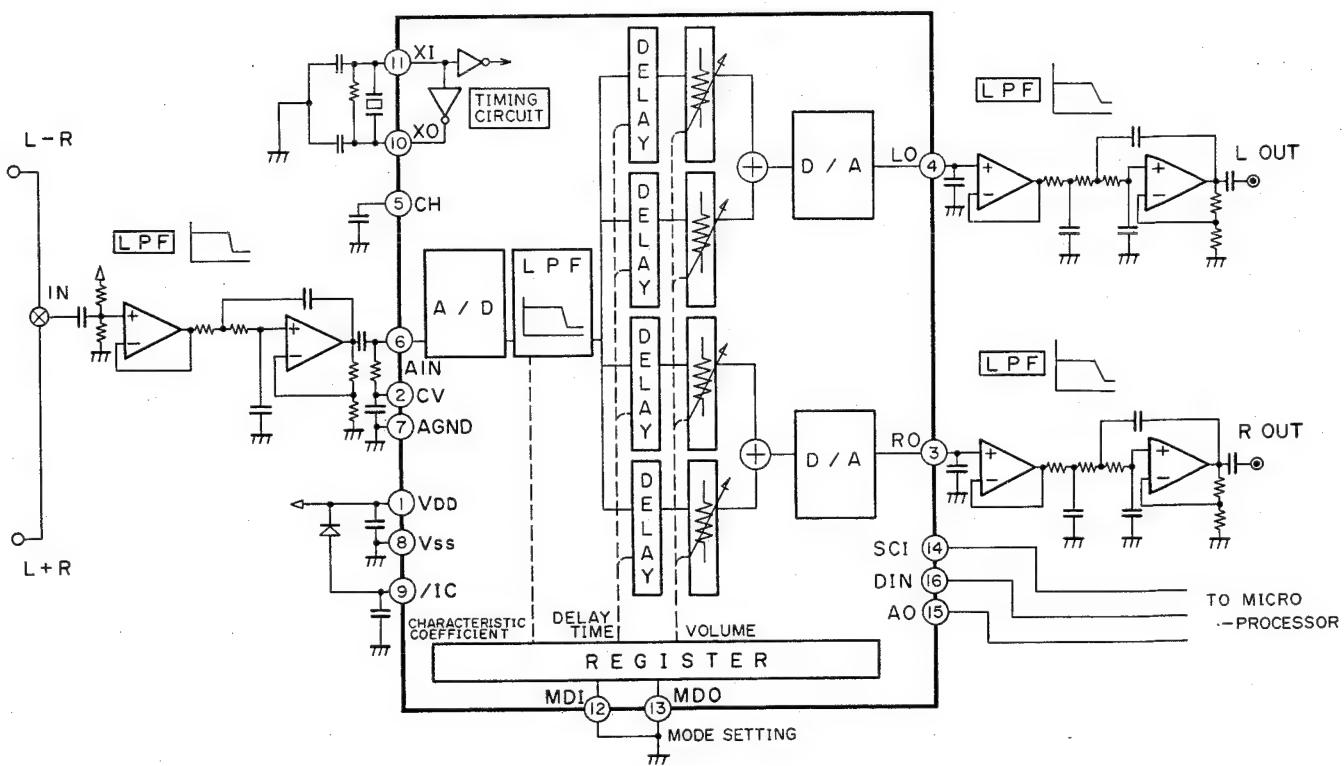
Any of the other three modes is a preset mode, the use of which permits ease at realizing a surround effect without a personal computer.

Terminal connection diagram



(TOP VIEW)

Block diagram



CIRCUIT DESCRIPTION

Pin functions

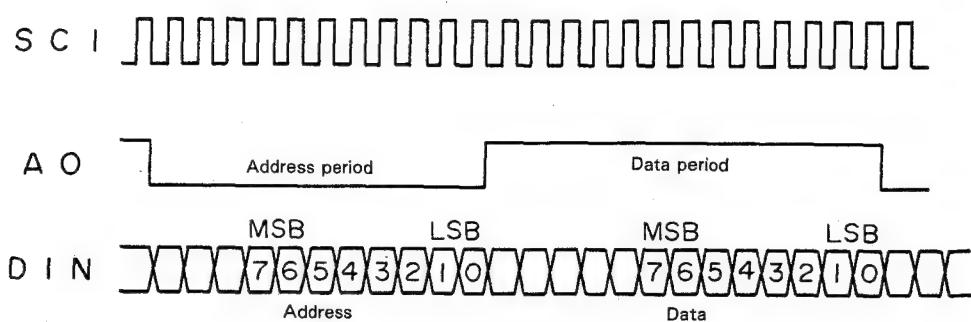
Pin No.	Name	I/O	Function
1	VDD	—	+5 V power supply pin
2	CV	O	A/D conversion reference voltage (+2.5 V) output pin
3	RO	O	Rch D/A conversion analog signal output pin
4	LO	O	Lch D/A conversion analog signal output pin
5	CH	O	Externally connected sample-hold capacitor pin
6	AIN	I	Analog signal input pin
7	AGND	—	Ground this pin and the input A/D conversion, output D/A conversion ground pin (Vss) outside in common.
8	Vss	—	Digital system, system ground pin
9	/IC	*I	Reset pin
10	XO	O	Crystal oscillator connection pin
11	XI	I	Crystal oscillator connection pin (system clock pulse input pin)
12	MD1	*I	Mode setting pin
13	MDO	*I	Mode setting pin
14	SCI	I	Personal computer data shift clock pulse input pin
15	AO	I	Personal computer address/data identification signal input pin
16	DIN	I	Personal computer data input pin

* Any pin marked * has a pull-up resistance inside.

Manual mode

Various effects can be created by inputting necessary parameters from pins SCI, AO and DIN by a personal computer, etc.

Input is made in the order of address and then data in the signal timing shown below.



Signals AO and DIN are taken in at each leading edge of clock pulse SCI. For this purpose, the values of signals AO and DIN need to be stable at each rise time of clock pulse SCI. Even when sending of SCI, AO and DIN, when unused, is stopped, there occurs no problem.

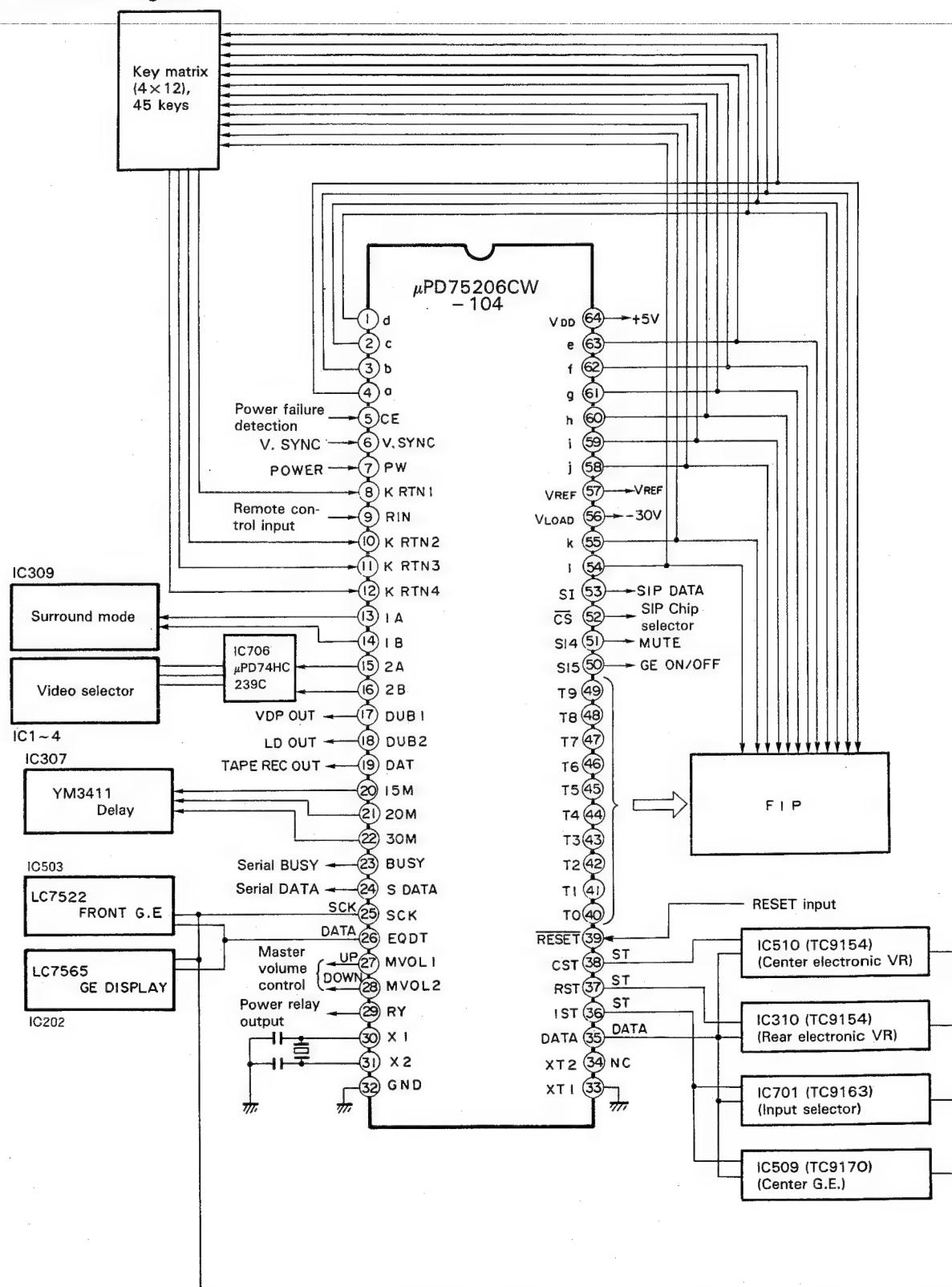
However, after valid final data AO changes, it is necessary to send one pulse of SCI.

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CIRCUIT DESCRIPTION

IC201: μ PD75206CW-104 (X25-3610-81)
MICROPROCESSOR

Terminal connection diagram



CIRCUIT DESCRIPTION

Pin functions

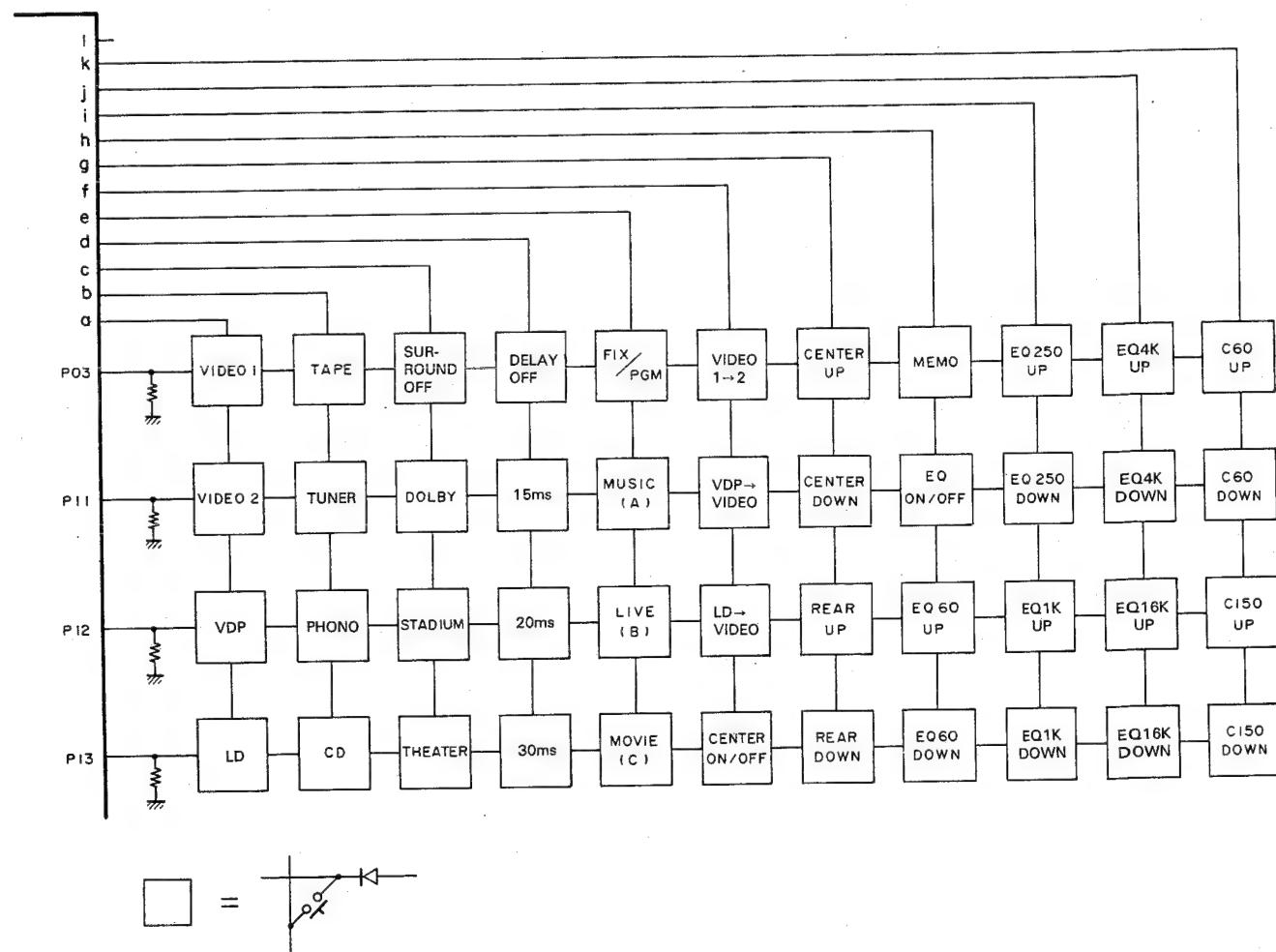
Pin No.	Name	Active	I/O	Function
1	d		O	Segment output (key matrix) d
2	c		O	Segment output (key matrix) c
3	b		O	Segment output (key matrix) b
4	a		O	Segment output (key matrix) a
5	CE	H	I	Power failure input
6	V.SYNC		I	V-sync input
7	PW		I	POWER
8	K RTN 1	H	I	Key data input 1
9	R IN		I	Remote control input
10	K RTN 2	H	I	Key data input 2
11	K RTN 3	H	I	Key data input 3
12	K RTN 4	H	I	Key data input 4
13	1A		O	Surround mode selection
14	1B		O	
15	2A		O	Video input selection
16	2B		O	
17	DUB 1	H	O	VDP REC OUT selection
18	DUB 2	H	O	LD REC OUT selection
19	DAT	H	O	TAPE REC OUT inhibit
20	15M	H	O	YM3411 control (Delay)
21	20M	H	O	
22	30M	H	O	
23	BUSY	H	O	Serial busy system control
24	SDATA		O	Serial data system control
25	SCK		O	Clock pulse output for MB88323A, TC9514, TC9163, LC7522, LC7565
26	EQDT		O	Serial data (for equalizer control)
27	MVOL 1	H	O	Master volume control output (UP)
28	MVOL 2	H	O	Master volume control output (DOWN)
29	RY	H	O	Power relay
30	X1		I	CLOCK
31	X2		I	
32	GND		—	GND
33	XT1		—	GND
34	XT2		—	NC
35	DATA		O	Electronic VR, input selector data output
36	IST	—	O	Input selector center G.E strobe
37	RST	—	O	Rear electronic VR strobe
38	CST	—	O	Center electronic VR strobes
39	RESET	L	I	Microprocessor reset pin
40	T0		O	Digit output
49	T9		O	
50	S15	H	O	G.E ON/OFF
51	S14	H	O	Mute output
52	CS	L	O	Chip selector for superimpose
53	SI	H	O	Data selector for superimpose

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CIRCUIT DESCRIPTION

Pin No.	Name	Active	I/O	Function
54	l		O	Segment output l
55	k		O	Segment output k
56	VLOAD		—	FL power supply (-30 V)
57	VREF		O	Reference voltage check pin
58	j		O	Segment output j
59	i		O	Segment output i
60	h		O	Segment output h
61	g		O	Segment output g
62	f		O	Segment output f
63	e		O	Segment output e
64	VDD		—	+5 V

• Key matrix



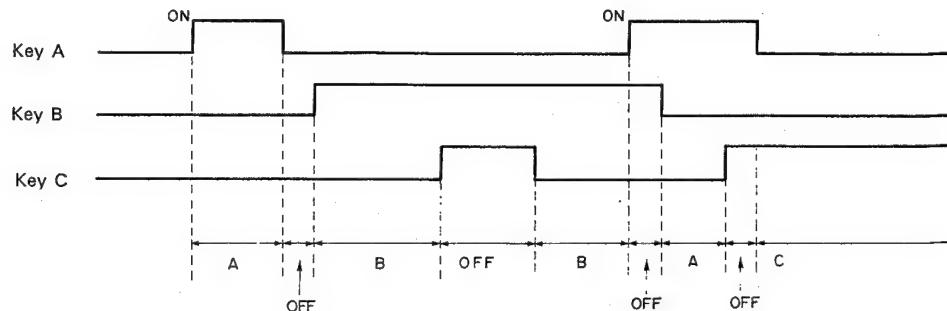
KA-V5000

CIRCUIT DESCRIPTION

- Key take-in

1) The key take-in method is a 2-key lock-out system, in which only when a key is pressed singly, this key is accepted, while when two or more key are pressed, they are handled as key OFF. (This key take-in method is the same as that in the remote control.)

2) The chattering absorb time is 10 msec.



Microcomputer Hardware Reset Method (How to reset to the same initial setting as the factory setting)

- (1) Disconnect the power cord.
- (2) Short-circuit the microcomputer's VDD (pin 64) and GND for 1 to 2 seconds.
- (3) Connect the power cord and switch the power ON.

At this time, the display should show the following.

EQ: OFF (Flat) MEMORY: FIX, A
SURROUND: OFF DELAY: OFF
SELECTOR: CD DUBBING: VIDEO 1 → VIDEO 2
REAR LEVEL: 5 CENTER LEVEL: 5

To bring the microcomputer pin in contact with the chassis, insert a metal stick through the notch provided on the front sub-chassis by the side of the power transformer.

KA-V5000

ADJUSTMENT/REGLAGES

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT (FRONT AMPLIFIER)	—	Connect a DC voltmeter across CN409(L) and CN410(R). (X07-248 A/2) (CKA-50201-01 A/2)	VOLUME:0	VR401(L) VR402(R) (X07-248 A/2) (CKA-50201-01 A/2)	4.5mV	(a)
2	IDLE CURRENT (REAR AMPLIFIER)	—	Connect a DC voltmeter across TP2(L) and TP1(R). (X09-289 A/2) (CKA-50201-02 A/2)	VOLUME:0	VR702(L) VR701(R) (X09-289 A/2) (CKA-50201-02 A/2)	4.5mV	(b)
3	IDLE CURRENT (CENTER AMPLIFIER)	—	Connect a DC voltmeter across TP3. (X09-289 A/2) (CKA-50201-02 A/2)	VOLUME:0	VR703 (X09-289 A/2) (CKA-50201-02 A/2)	4.5mV	(c)
4	VCO	No input	Connect a frequency counter to TP4. (X14-259 C/5) (CKA-50201-03 C/5)	—	VR1 (X14-259 C/5) (CKA-50201-03 C/5)	15.734kHz	(d)

REGLAGES

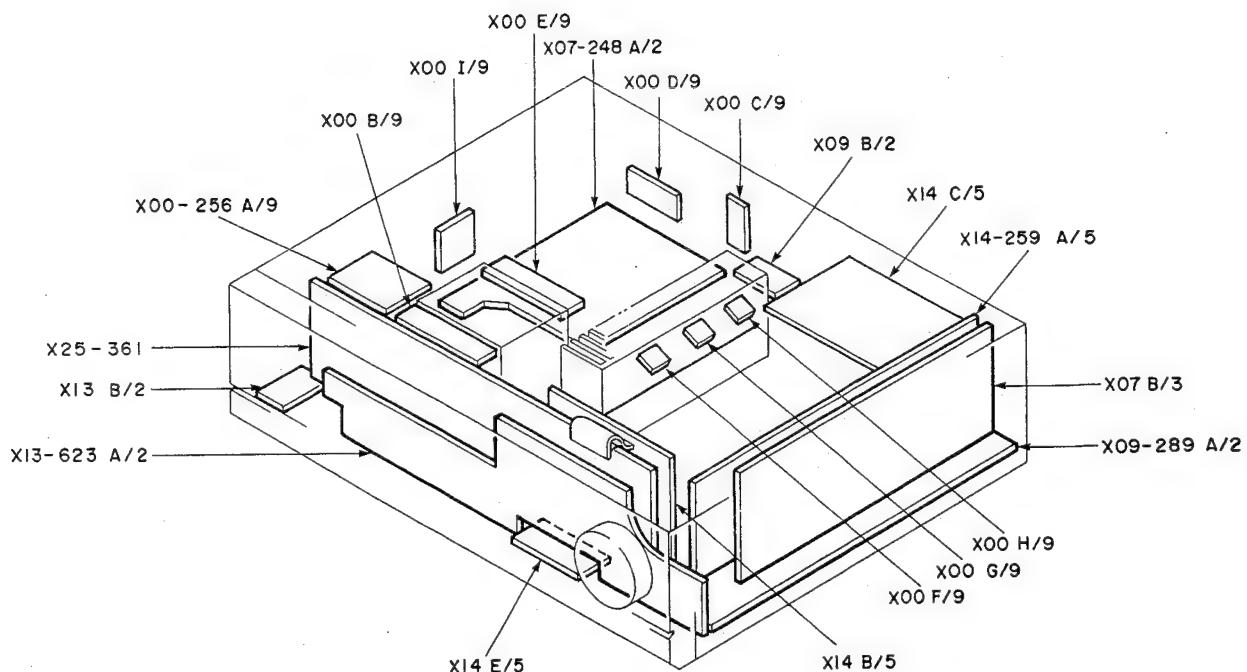
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION (AMPLIFICATEUR AVANT)	—	Raccorder un voltmètre CC entre CN409(L) et CN410(R). (X07-248 A/2) (CKA-50201-01 A/2)	VOLUME:0	VR401(L) VR402(R) (X07-248 A/2) (CKA-50201-01 A/2)	4.5mV	(a)
2	COURANT DE POLARISATION (AMPLIFICATEUR ARRIÈRE)	—	Raccorder un voltmètre CC entre TP2(L) et TP1(R). (X09-289 A/2) (CKA-50201-02 A/2)	VOLUME:0	VR702(L) VR701(R) (X09-289 A/2) (CKA-50201-02 A/2)	4.5mV	(b)
3	COURANT DE POLARISATION (AMPLIFICATEUR CENTRAL)	—	Raccorder un voltmètre CC sur TP3. (X09-289-02 A/2) (CKA-50201-02 A/2)	VOLUME:0	VR703 (X09-289 A/2) (CKA-50201-02 A/2)	4.5mV	(c)
4	VCO	Pas d'entrée	Raccorder un compteur de fréquence sur TP4. (X14-259 C/5) (CKA-50201-03 C/5)	—	VR1 (X14-259 C/5) (CKA-50201-03 C/5)	15.734kHz	(d)

ABGLEICH/PC BOARD LOCATION

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM (VORDERER VERSTÄRKER)	—	Gleichstrom-Voltmeter zwischen CN409(L) und CN410(R) anschließen. (X07-248 A/2) (CKA-50201-01 A/2)	VOLUME:0	VR401(L) VR402(R) (X07-248 A/2) (CKA-50201-01 A/2)	4,5mV	(a)
2	LEERLAUFSTROM (HINTERER VERSTÄRKER)	—	Gleichstrom-Voltmeter zwischen TP2(L) und TP1(R) anschließen. (X09-289 A/2) (CKA-50201-02 A/2)	VOLUME:0	VR702(L) VR701(R) (X09-289 A/2) (CKA-50201-02 A/2)	4,5mV	(b)
3	LEERLAUFSTROM (MITTLERER VERSTÄRKER)	—	Gleichstrom-Voltmeter an TP3 anschließen. (X09-289 A/2) (CKA-50201-02 A/2)	VOLUME:0	VR703 (X09-289 A/2) (CKA-50201-02 A/2)	4,5mV	(c)
4	VCO	Kein Eingang	Frequenzzähler an TP4 anschließen. (X14-259 C/5) (CKA-50201-03 C/5)	—	VR1 (X14-259 C/5) (CKA-50201-03 C/5)	15,734kHz	(d)

PC BOARD LOCATION



KA-V5000

VOLTAGE TABLES

(X14-2590-81)

IC501,502	14	13.3V
	16	-13.3V

IC902	1~3	0V
	4	-14V
	5~7	0V
	8	14V

Q15	E	0V
	C	11.5V
	B	0V

IC309,310	7	-5V
	16	5V

Q415	E	(-41.5V)
	C	(-29V)
	B	-

Q713	E	(-1.2V)
	C	(0.6V)
	B	(-0.6V)

Q204	E	0.6V
	C	-
	B	-

IC503	1	6V
	14	-6V
	15	4.7V
	28	0V

IC906	IN	15V
	GND	-
	OUT	6.5V

Q903,904	E	1.1V
	C	14V
	B	1.7V

IC1,3	9	9V
	5~7	0V
	8	14V

IC4	1	4.9V
	6	9V

IC5	1~4	-
	5	4.9V
	6	0V
	7	1.9V
	8	-2.4V

IC5	9	0V
	10	2.5V
	11	-
	12	0.5V
	13	0.9V

Q301,302	E	5V
	C	-
	B	-

IC401,402	1,2	56.6V
	3	50.2V
	4,5	0V
	6	-
	7	-54.9V

Q301,302	8	0V
	9,10	(-56.5V)
	11	-0.6V
	12	0.6V

IC403	1~3	0V
	4	4.2V
	5	-
	6	3.2V
	7	0V

Q403,404	8	4.5V
	E	(-1.1V)
	C	(0.6V)
	B	(-0.5V)

Q405,406	1,2	(29.5V)
	3	24V
	4,5	0V
	6	-29V
	7	(-1.2V)

Q407,408	8	(0.6V)
	9,10	(-29.5V)
	11,12	-

Q715	E	-
	C	(29.5V)
	B	-

Q205	E	5.5V
	C	-
	B	-

Q716	E	-
	C	(29.5V)
	B	-

Q717	E	-
	C	(-29.5V)
	B	-0.6V

Q718	E	0V
	C	-
	B	-

Q725	E	(29.5V)
	C	-
	B	-

Q726	E	(-29.5V)
	C	-
	B	-

Q727	E	12V
	C	-
	B	-

X25-3610-81	E	(-29.5V)
	C	-
	B	-

IC201	56	-29V
	57	-29.1V
	64	5V

IC202	42	5V
	43	-

IC203	1	5V
	2	-
	3	5V

IC204	3,16	5V
	3,17	-

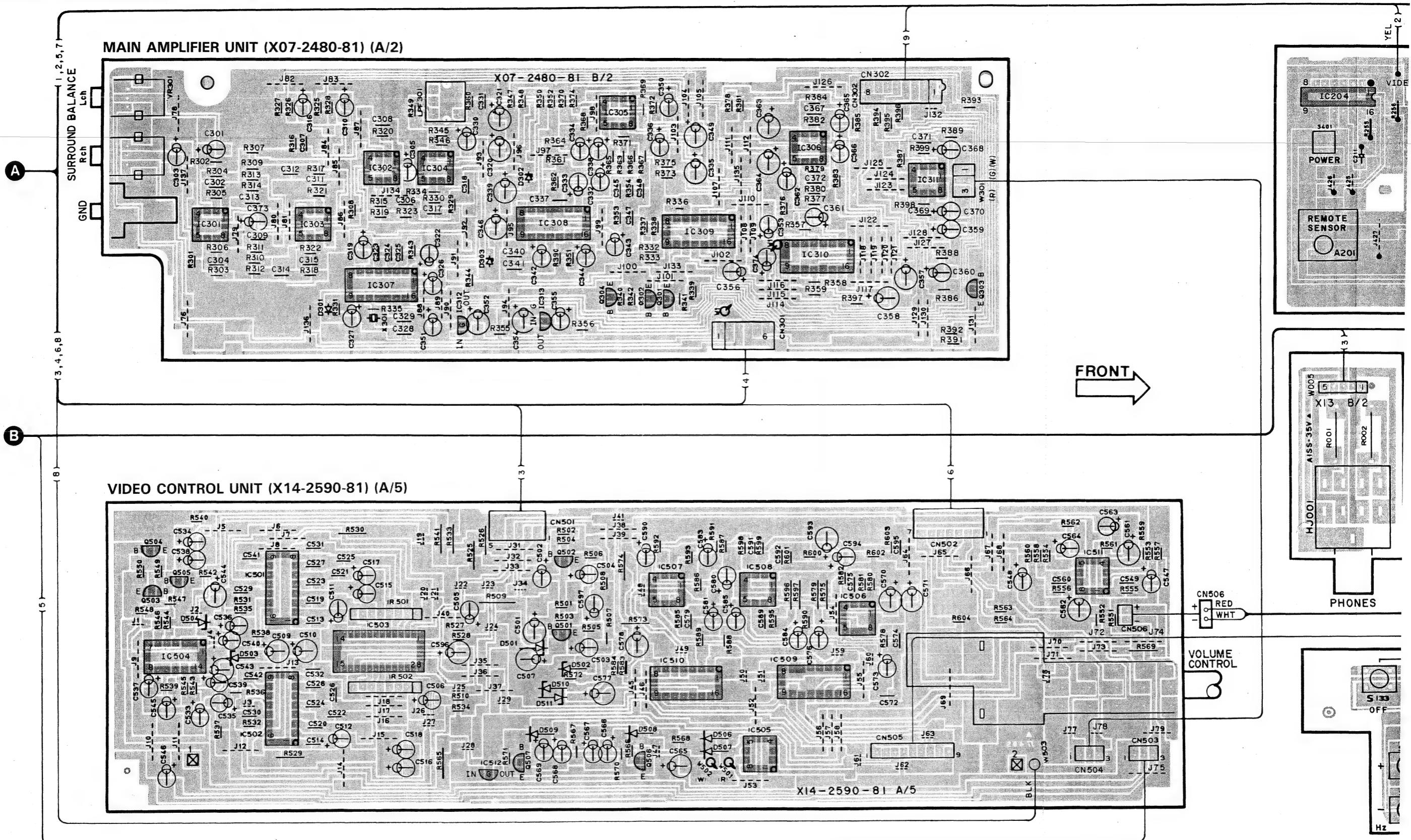
FL201	E	-
	C	5V
	B	-

Q201	E	-
	C	5V
	B	-

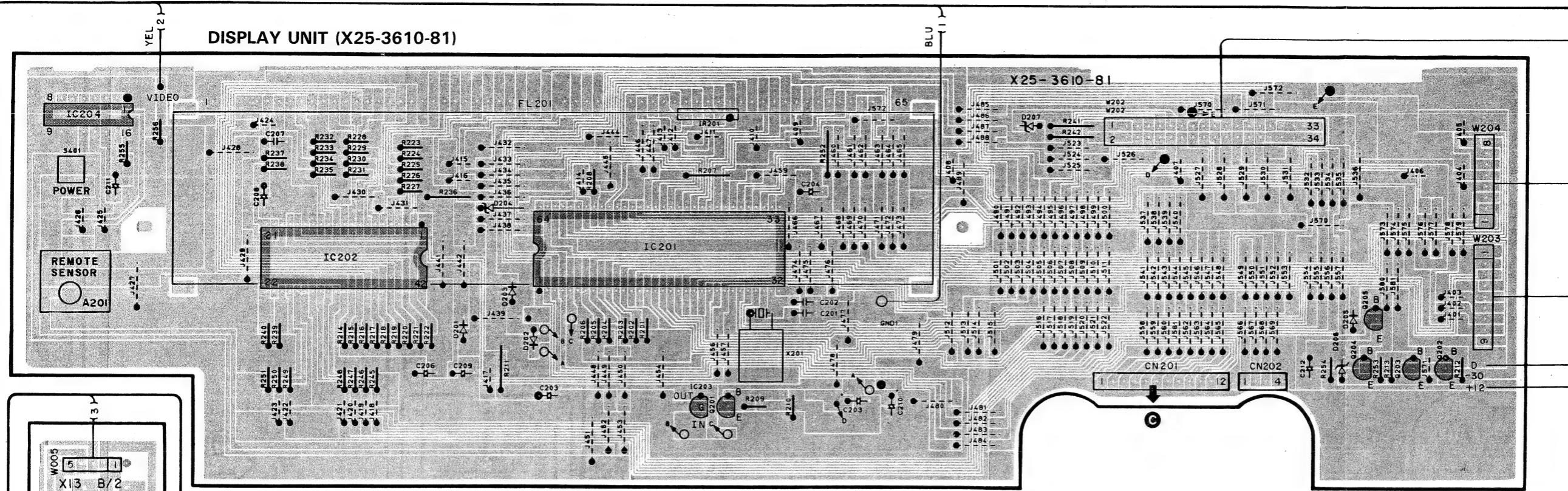
Q202	E	-29.7V
	C	-29V
	B	-

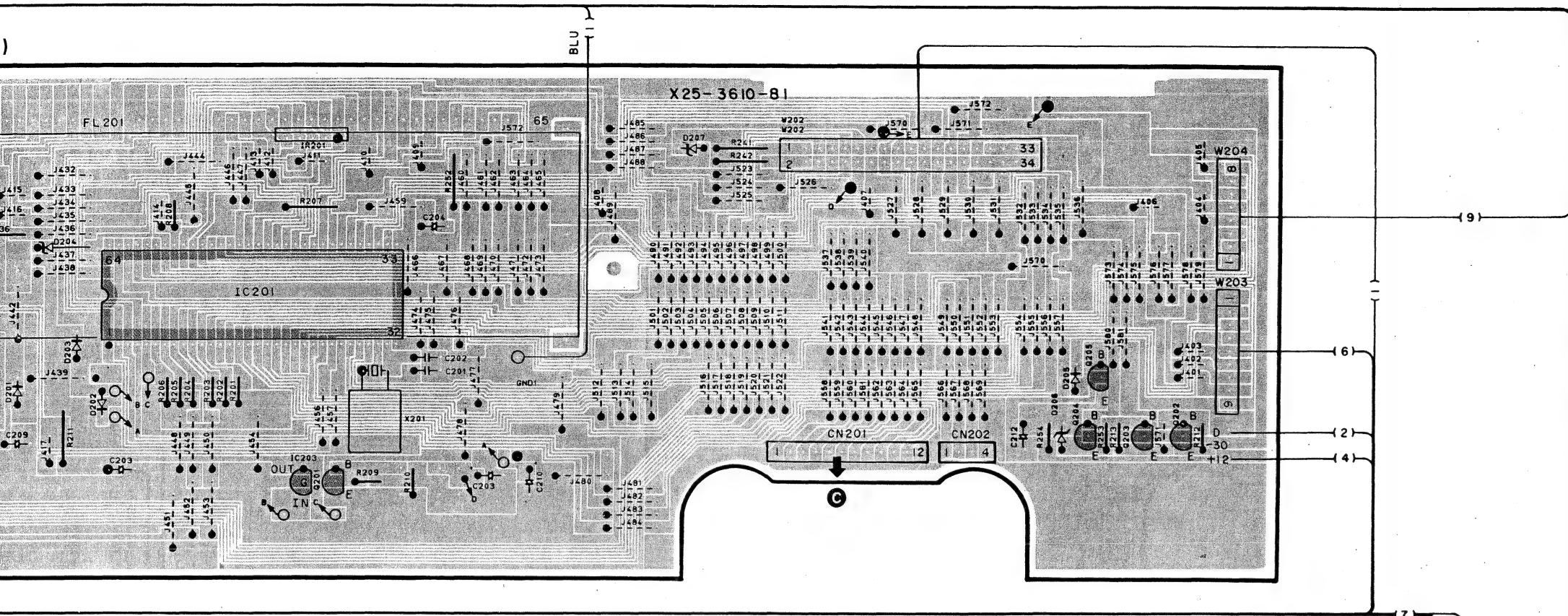
Q203	E	-29V
	C	-29V
	B	-28.3V

PC BOARD (Component side view)

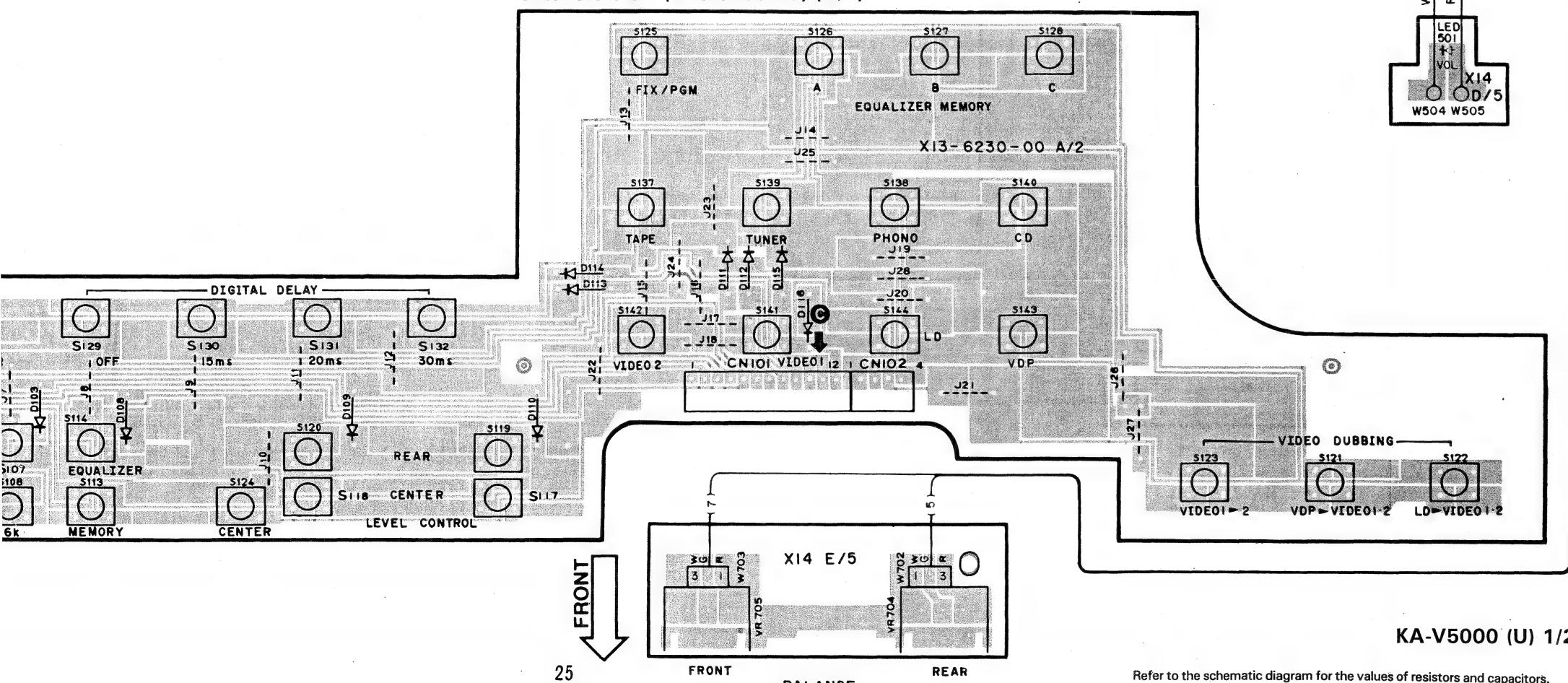


DISPLAY UNIT (X25-3610-81)





SWITCH UNIT (X13-6230-00) (A/2)



KA-V5000 (U) 1/2

Refer to the schematic diagram for the values of resistors and capacitors.

**MAIN AMPLIFIER UNIT
(X07-2480-81) (A/2)**

Ref. No.	Address
IC	Q
	301
	302
	303
	304
301	2B
302	2D
303	2C
304	2D
305	2E
306	2F
307	3D
308	2E
309	2F
310	2F
311	2G
312	3D
313	3E

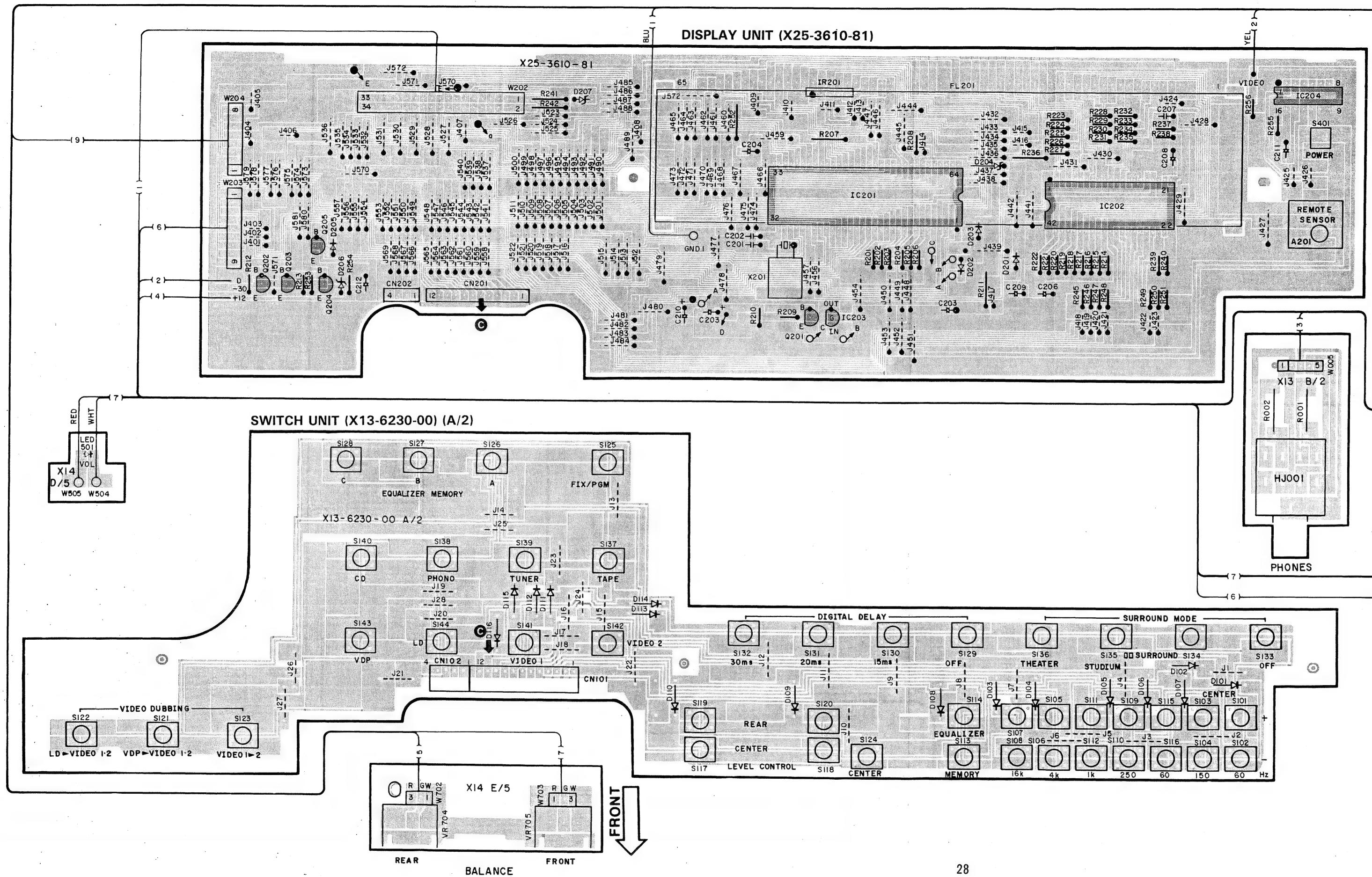
**VIDEO CONTROL UNIT
(X14-2590-81) (A/5)**

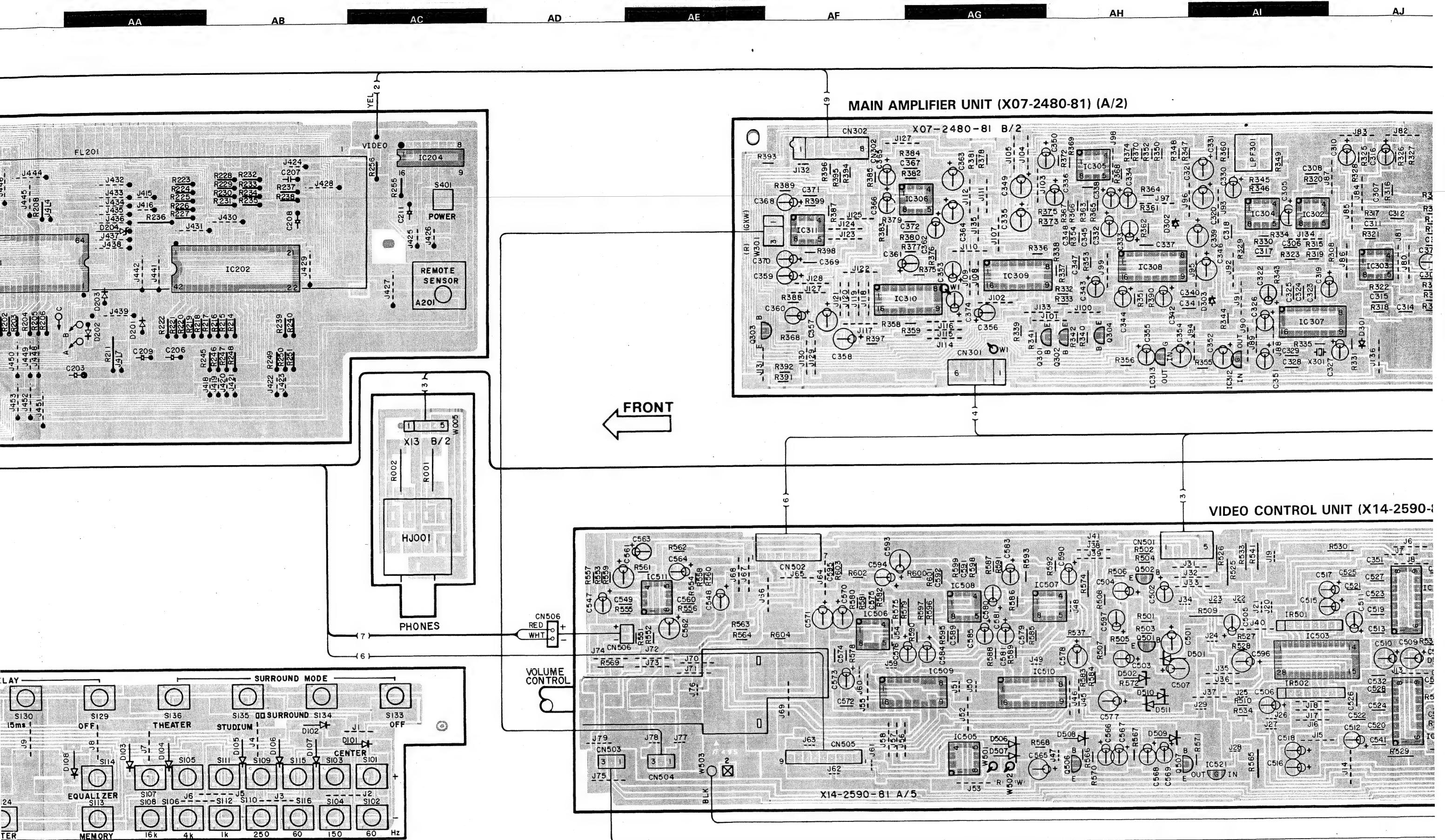
Ref. No.		Address
IC	Q	
	501	5E
	502	5E
	503	5B
	504	5B
	505	5B
	506	6E
	507	6D
501		5C
502		6C
503		5D
504		5B
505		6F
506		5G
507		5E
508		5F
509		5F
510		5F
511		5H
512		6D

DISPLAY UNIT
(X25-3610-81)

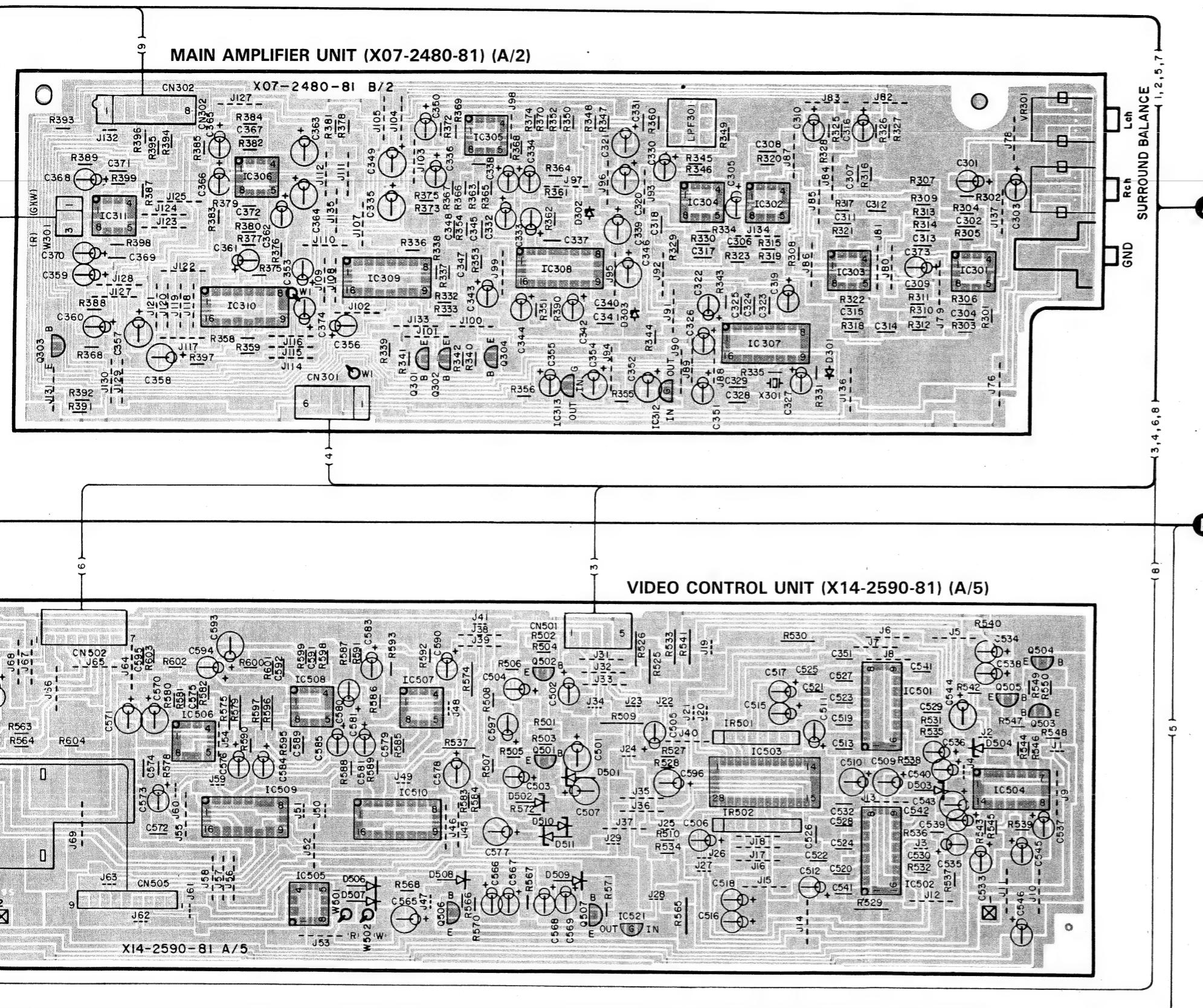
Ref. No.	Address
IC	Q
	201
	202
	203
	204
	205
201	2M
202	2K
203	3M
204	1L

PC BOARD (Foil side view)





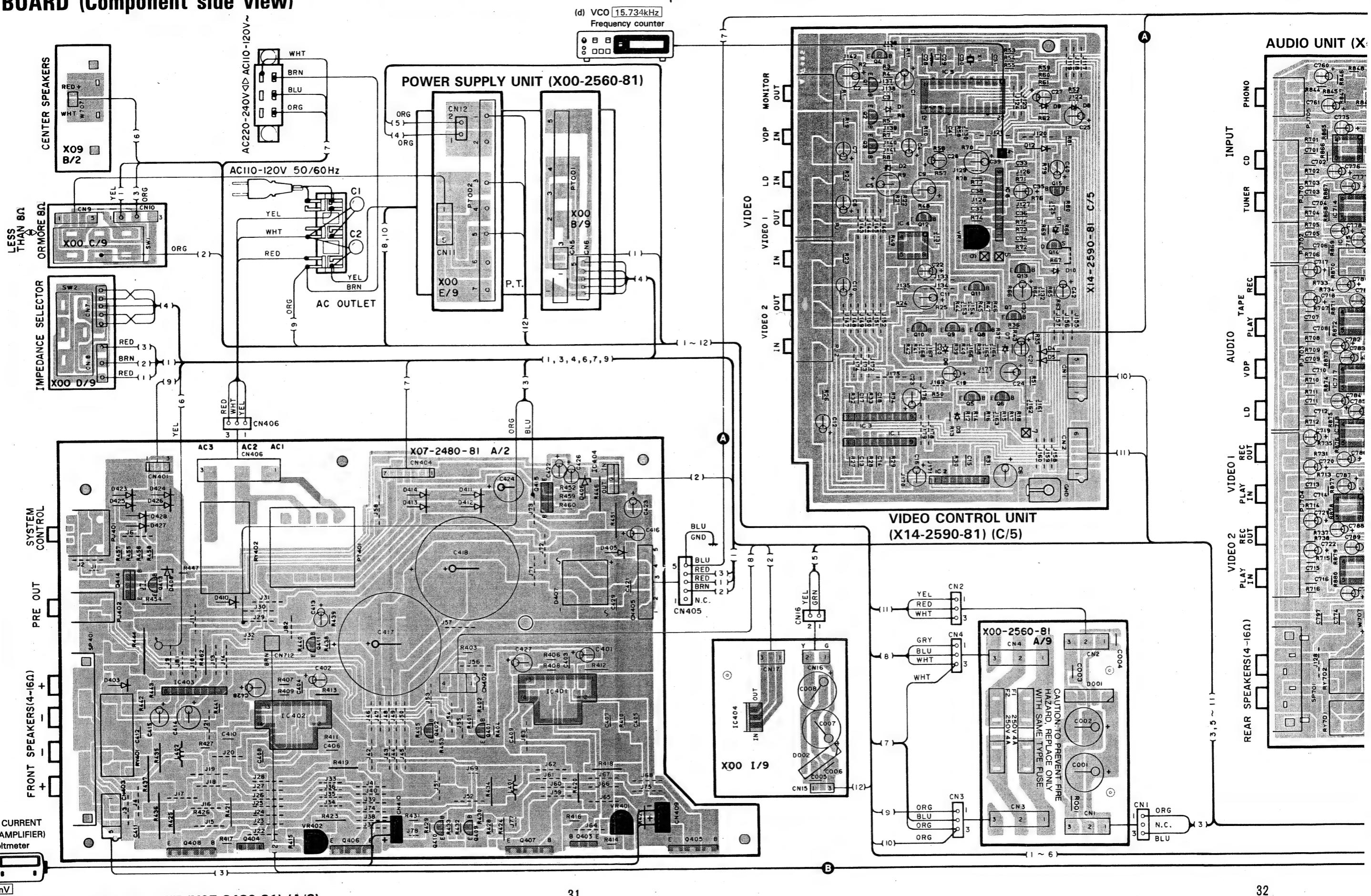
Refer to the schematic

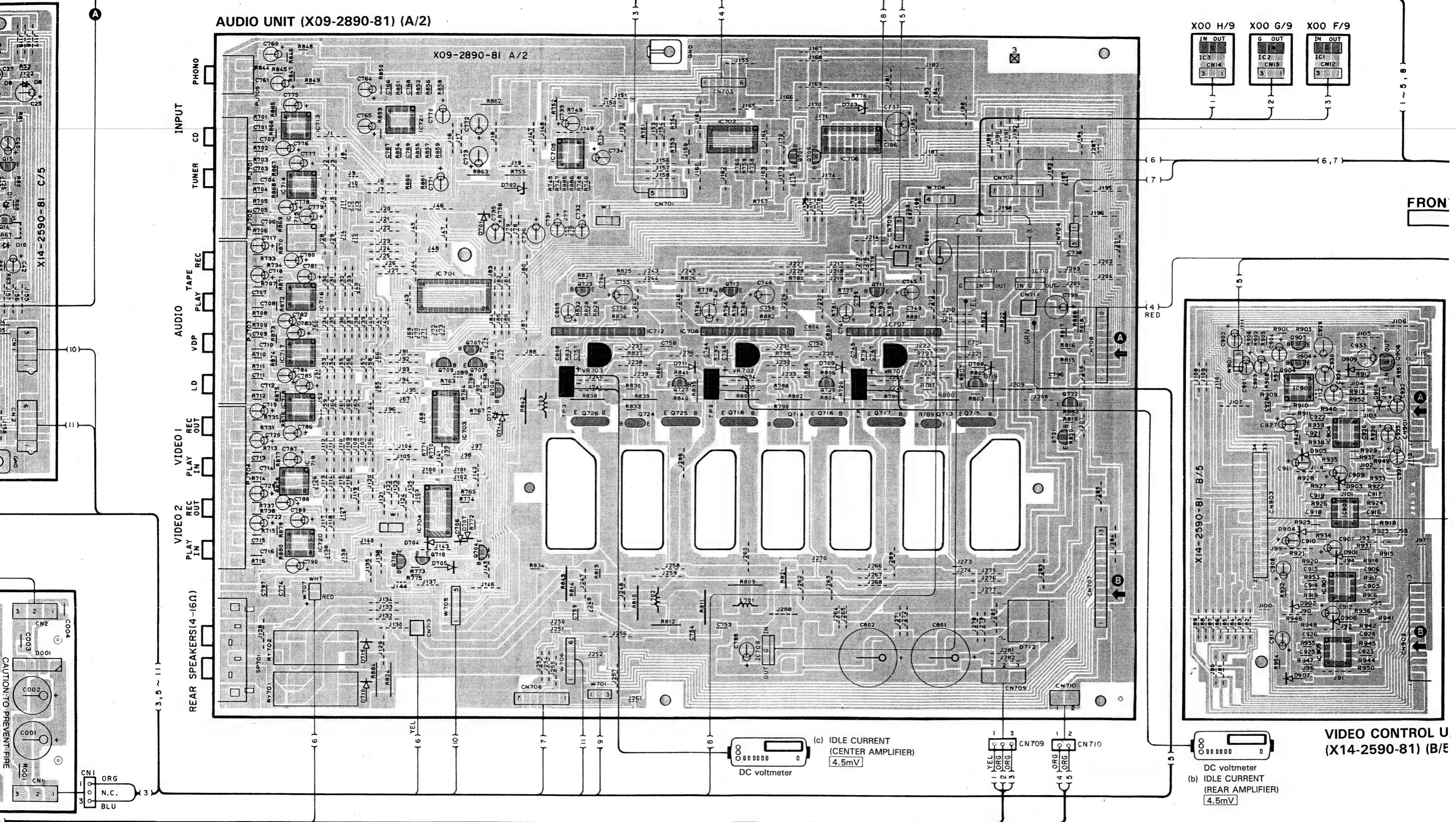


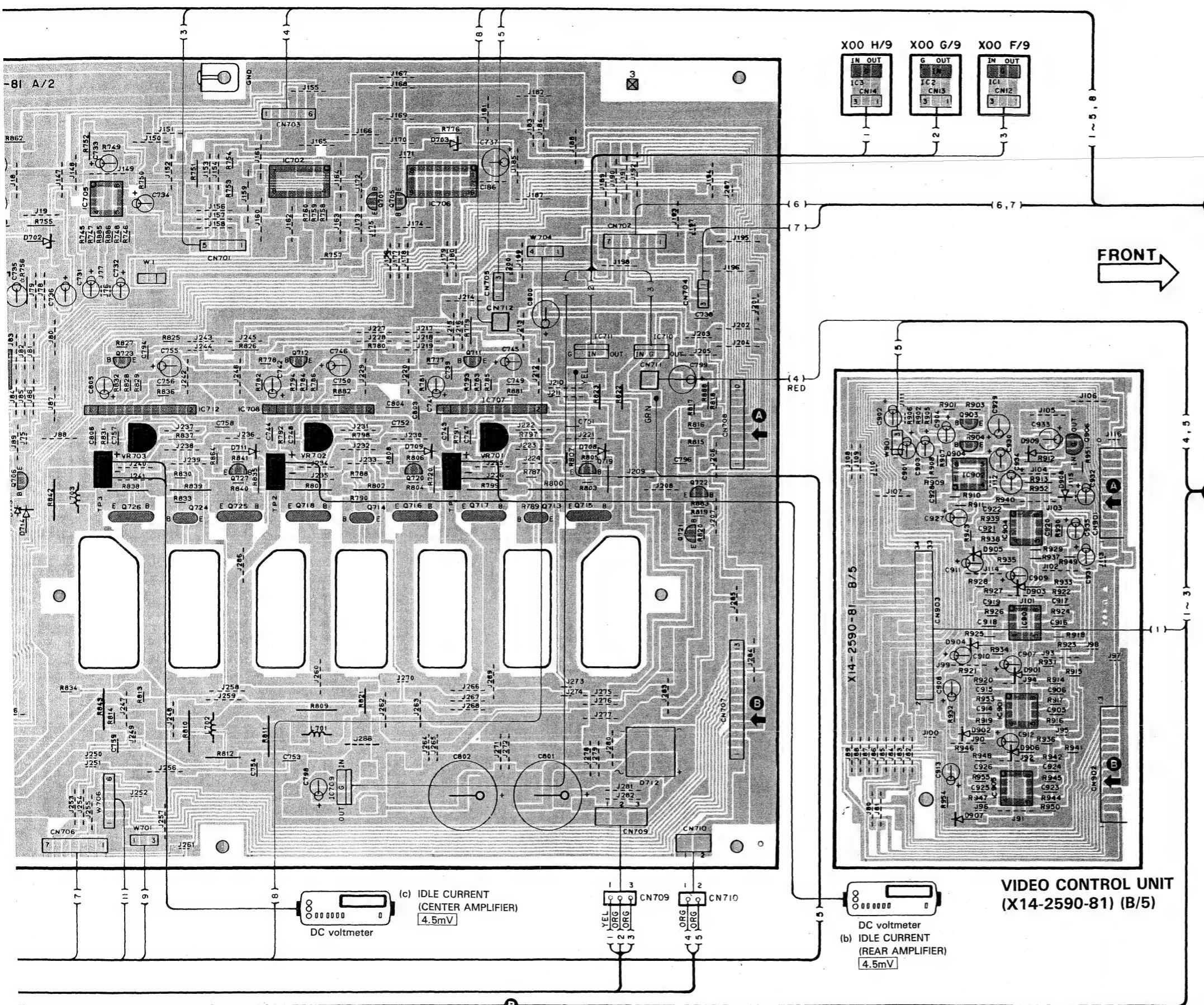
KA-V5000 (U) 1/2

Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Component side view)







**VIDEO CONTROL UNIT
(X14-2590-81) (B/5)**

**VIDEO CONTROL UNIT
(X14-2590-81) (B/5)**

Ref. No.	Address
IC	Q
903	3BC
904	3BC
906	3BD
901	5BD
902	4BC
903	5BD
904	4BD
905	6BD

**AUDIO UNIT
(X09-2890-81) (A/2)**

(X05-2550-81) (A/Z)	
Ref. No.	Address
IC	Q
701	2AZ
702	4AW
703	—
704	5AX
705	2AZ
706	4AX
707	3AW

**VIDEO CONTROL UNIT
(X14-2590-81) (C/5)**

Ref. No.	Address
IC	Q
	1AS
	2AS
	2AS
	1AS
	4AT
	4AT
	3AT
	3AT
	3AS
	3AS
	3AT
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	3AT
	2AT
	2AT
1	4AS
2	4AT
3	4AS
4	2AS
5	1AS
6	2AT

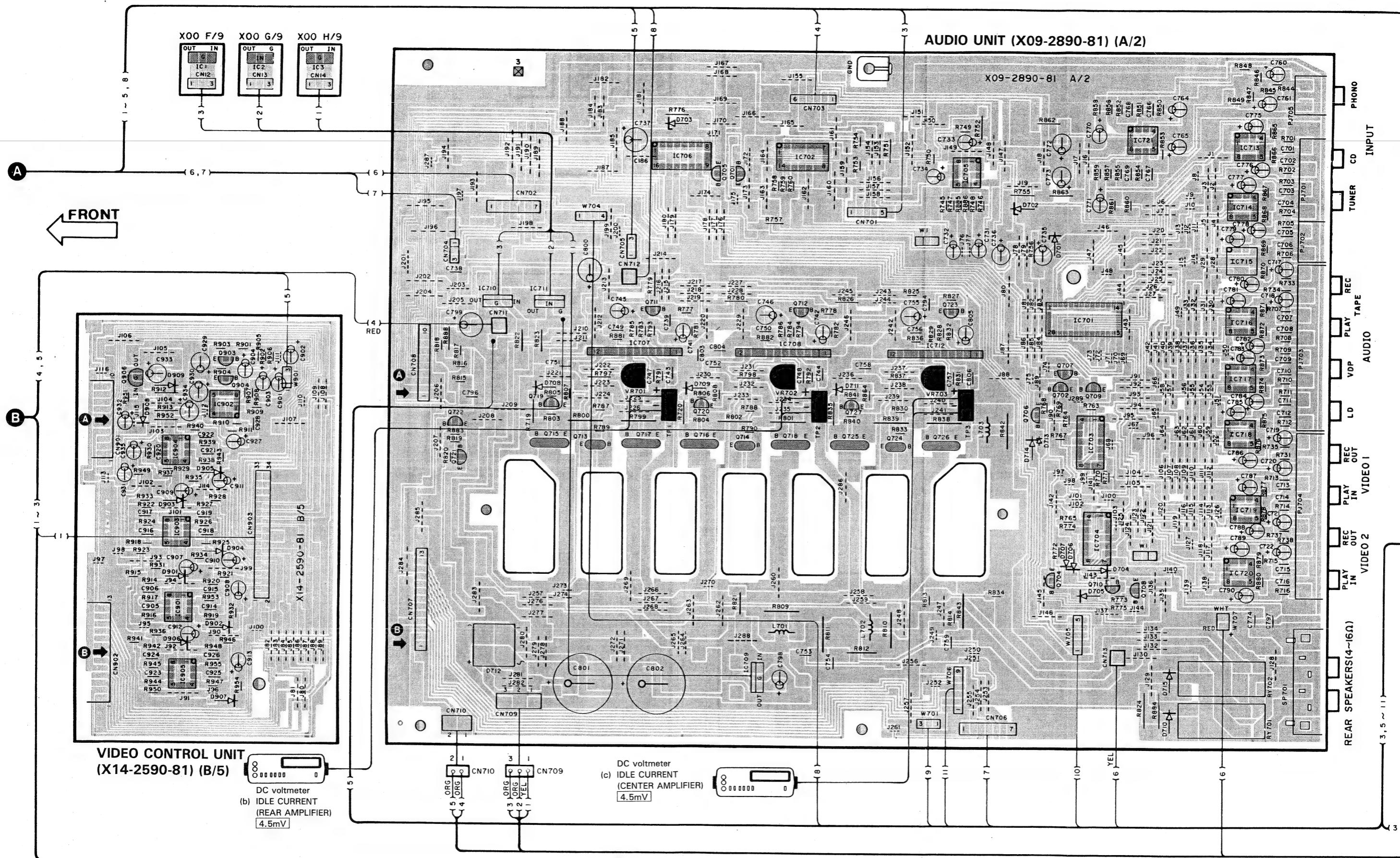
**MAIN AMPLIFIER UNIT
(X07-2480-81) (A/2)**

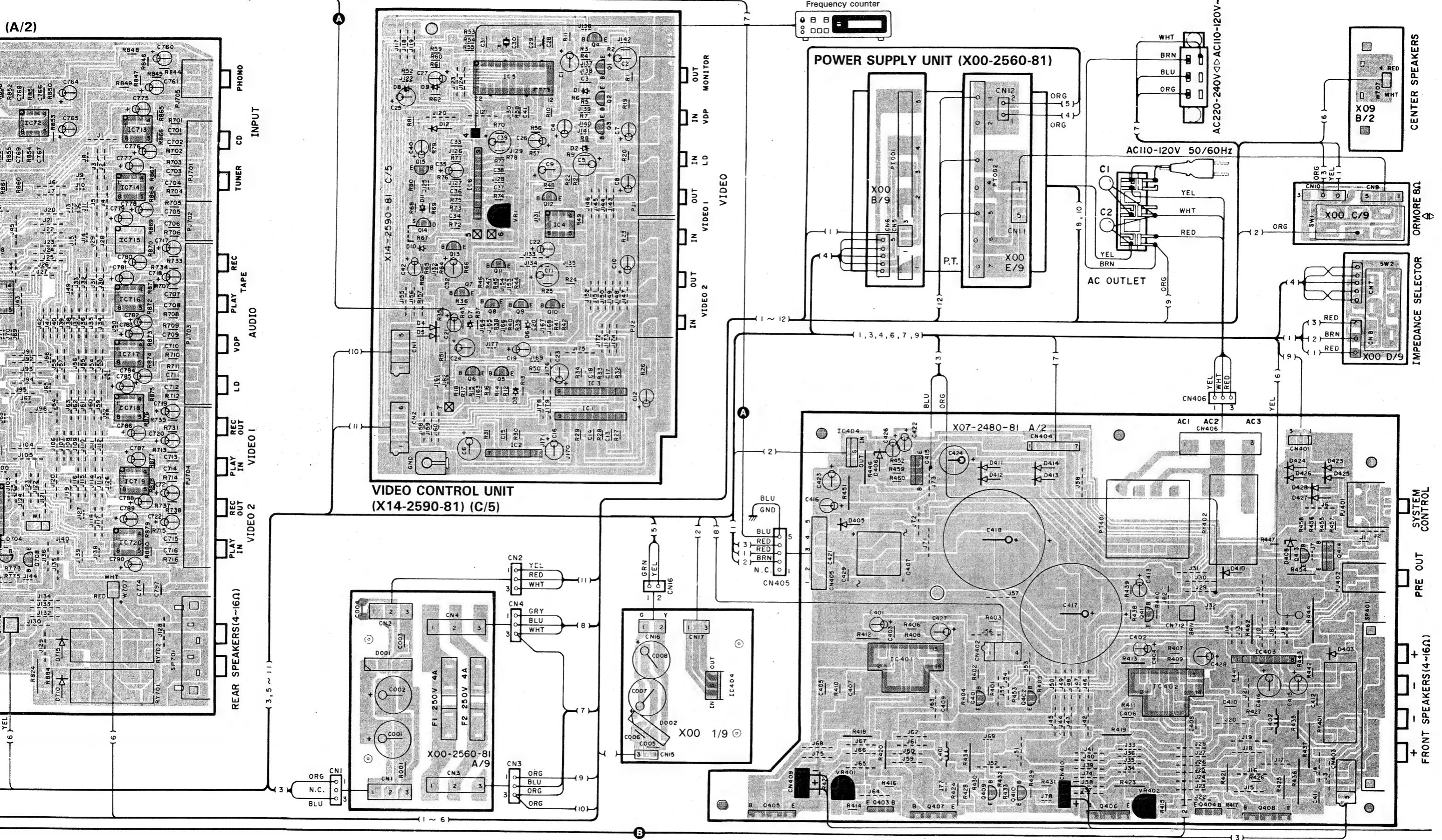
Ref. Nq.		
IC	Q	Address
	401	6AP
	402	6AP
	403	7AQ
	404	7AO
	405	7AR
	406	7AO
	407	7AQ
	408	7AN
	409	7AP
	410	7AP
	411	5AO
	413	5AN
	414	5AN
	415	4AQ
401		6AQ
402		6AO
403		6AN
404		4AO

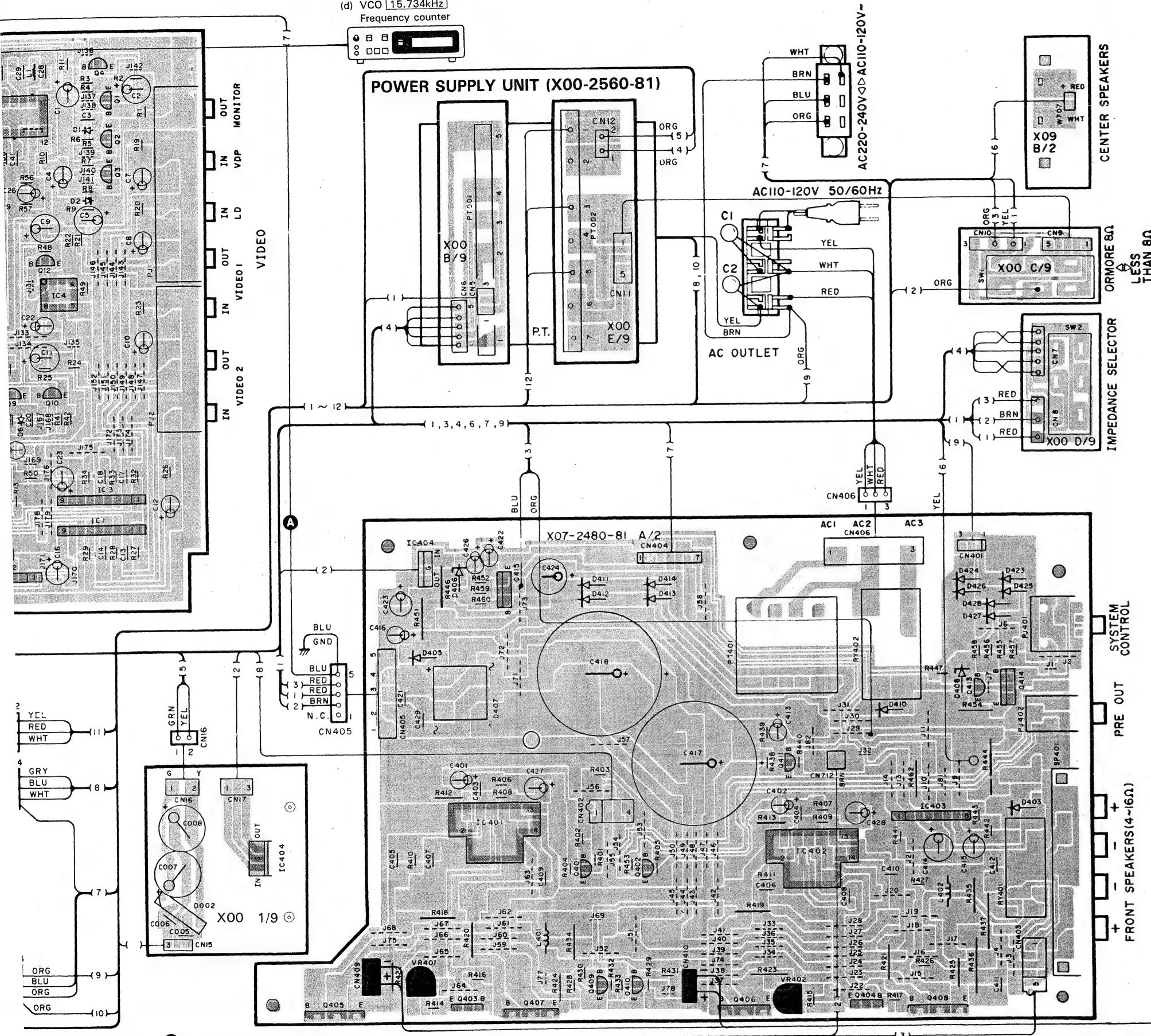
**POWER SUPPLY UNIT
(X00-2560-81) (I/9)**

(A00-2500-81) (1/3)		Address
Ref. No.	IC	
404	Q	6AR

PC BOARD (Foil side view)







MAIN AMPLIFIER UNIT (X07-2480-81) (A/2)

KA-V5000 (U) 2/

Refer to the schematic diagram for the values of resistors and capacitors.

(a) IDLE CURRENT
(FRONT AMPLIFIER)
DC voltmeter 4.5

VIDEO CONTROL UNIT (X14-2590-81) (B/5)		
Ref. No.	IC	Q
		903
		904
		906
901		5B0
902		4B0
903		5B0
904		4B0
905		6B0

**VIDEO CONTROL UNIT
(X14-2590-81) (C/5)**

Ref. No.		Address
IC	Q	
	1	1BR
	2	2BR
	3	2BR
	4	1BR
	5	4BQ
	6	4BQ
	7	3BQ
	8	3BQ
	9	3BQ
	10	3BR
	11	3BQ
	12	2BQ
	13	3BQ
	14	2BQ
	15	2BQ
1		4BR
2		4BQ
3		4BR
4		2BR
5		1BQ
6		2BQ

**AUDIO UNIT
(X09-2890-81) (A/2)**

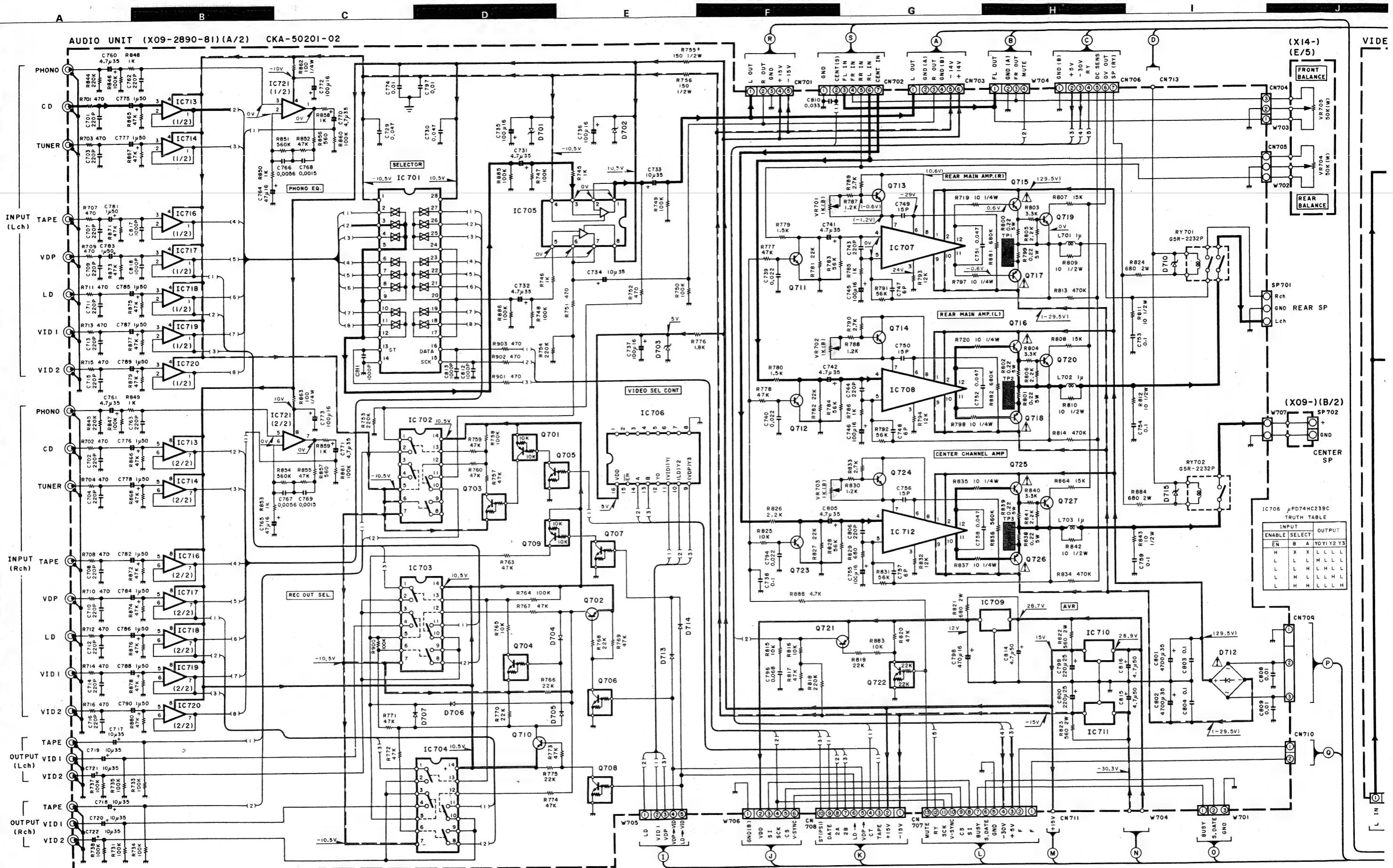
Ref. No.		Address
IC	Q	
	701	2B
	702	4B
	703	—
	704	5B
	705	2B
	706	4B
	707	3B
	708	5B
	709	—

**MAIN AMPLIFIER UNIT
(X07-2480-81) (A/2)**

Ref. No.		Address
IC	Q	
	401	6BU
	402	6BU
	403	7BT
	404	7BV
	405	7BS
	406	7BV
	407	7BT
	408	7BW
	409	7BU
	410	7BU
	411	5BV
	413	5BW
	414	5BW
	415	4BT
401		6BT
402		6BV
403		6BW
404		4BT

**POWER SUPPLY UNIT
(X00-2560-81) (I/9)**

Ref. No.	Address	
IC	Q	
404		6BS



DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un mètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des caractéristiques individuelles des appareils et des instruments.

VIDE

(X14-)
(E/5)

FRONT BALANCE

VR705
50K (W)

REAR BALANCE

VR704
50K (W)

CENTER SP

SP701

Rch

GND

Lch

(X09-)(B/2)

SP702

+

GND

REC OUT SEL

IC706

μPD74HC239C

TRUTH TABLE

INPUT

ENABLE

SELECT

OUTPUT

EN

H

X

Y1

Y2

Y3

L

L

H

L

H

L

H

L

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H

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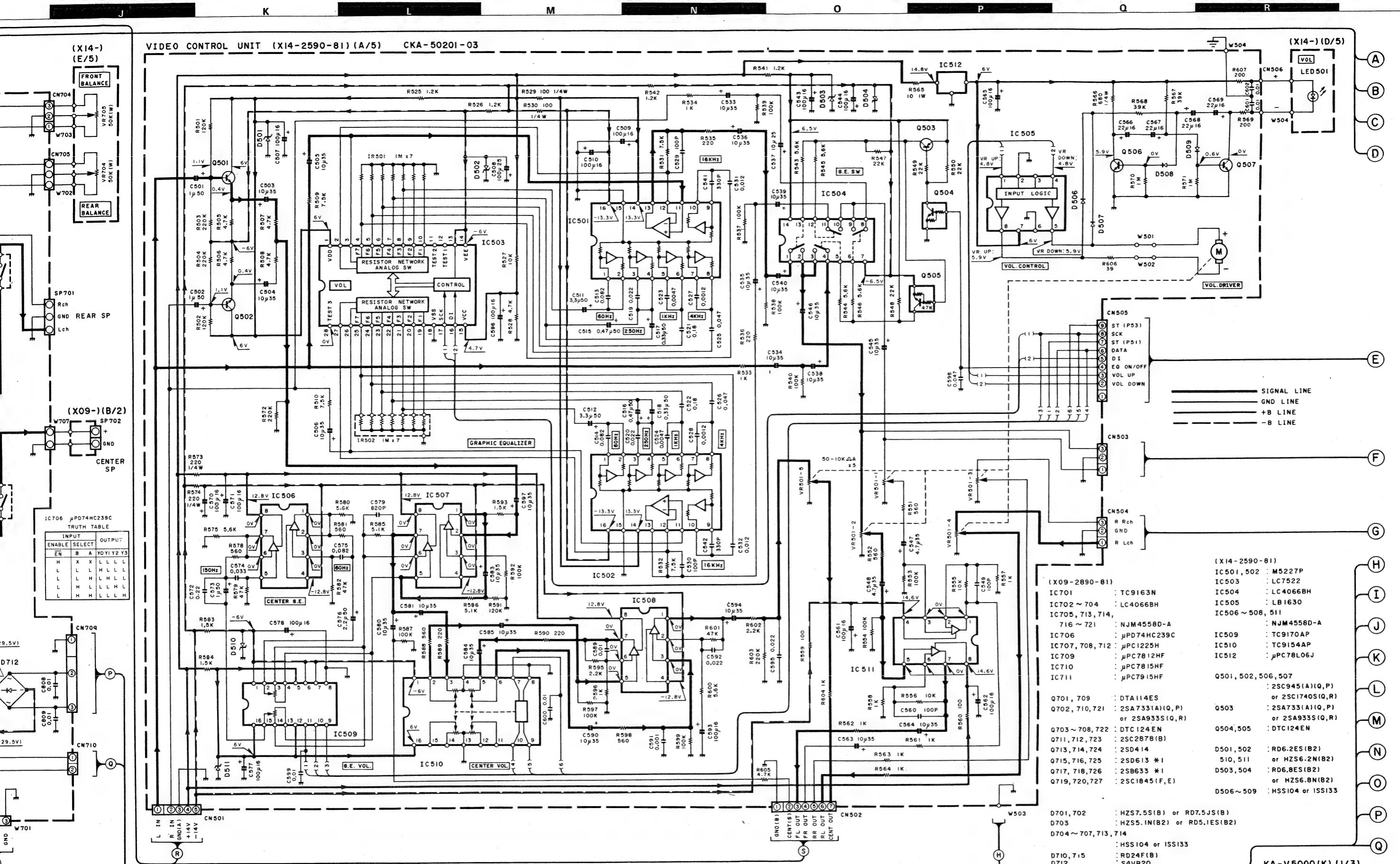
H

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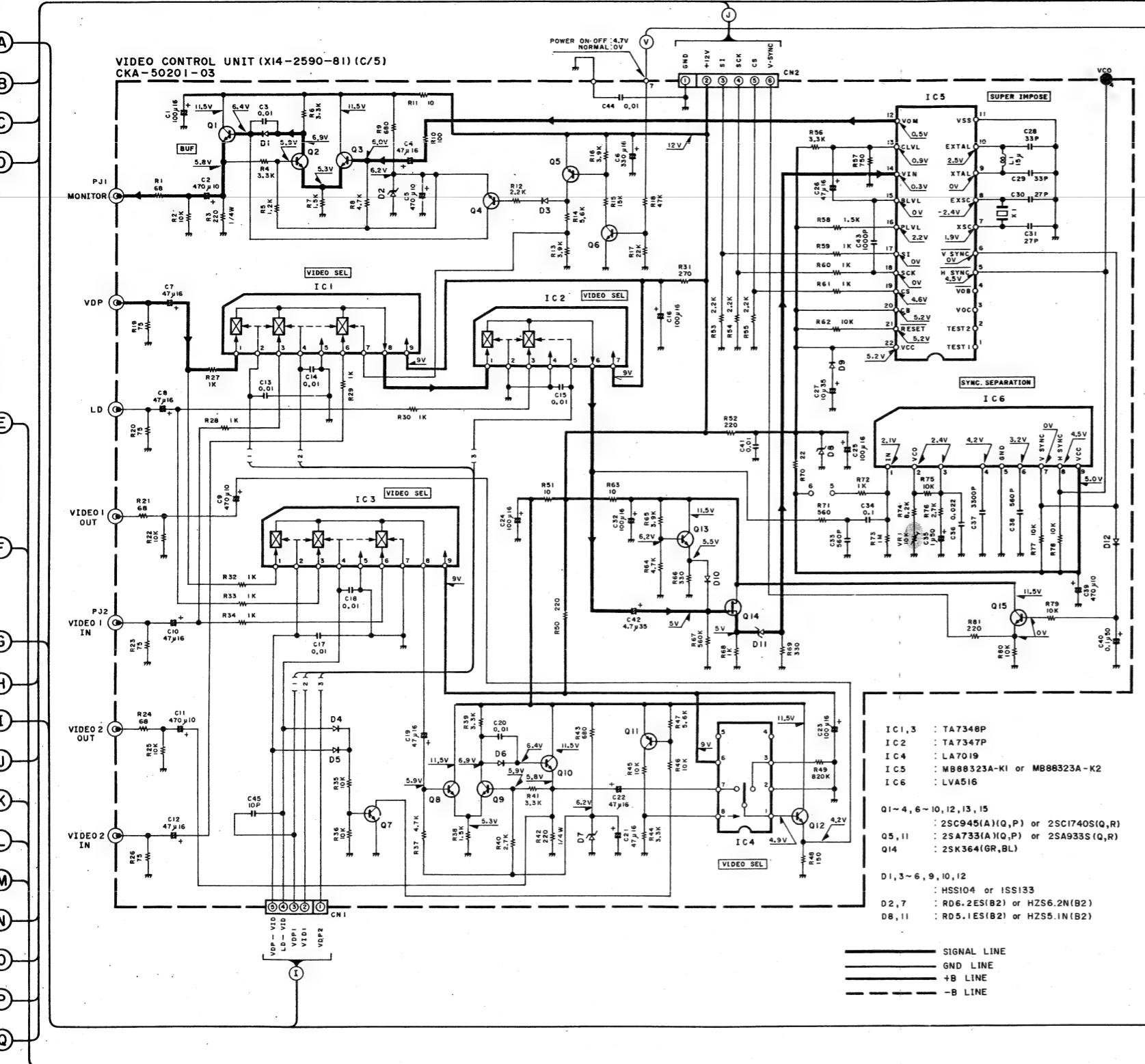
tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les résultats peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanden die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

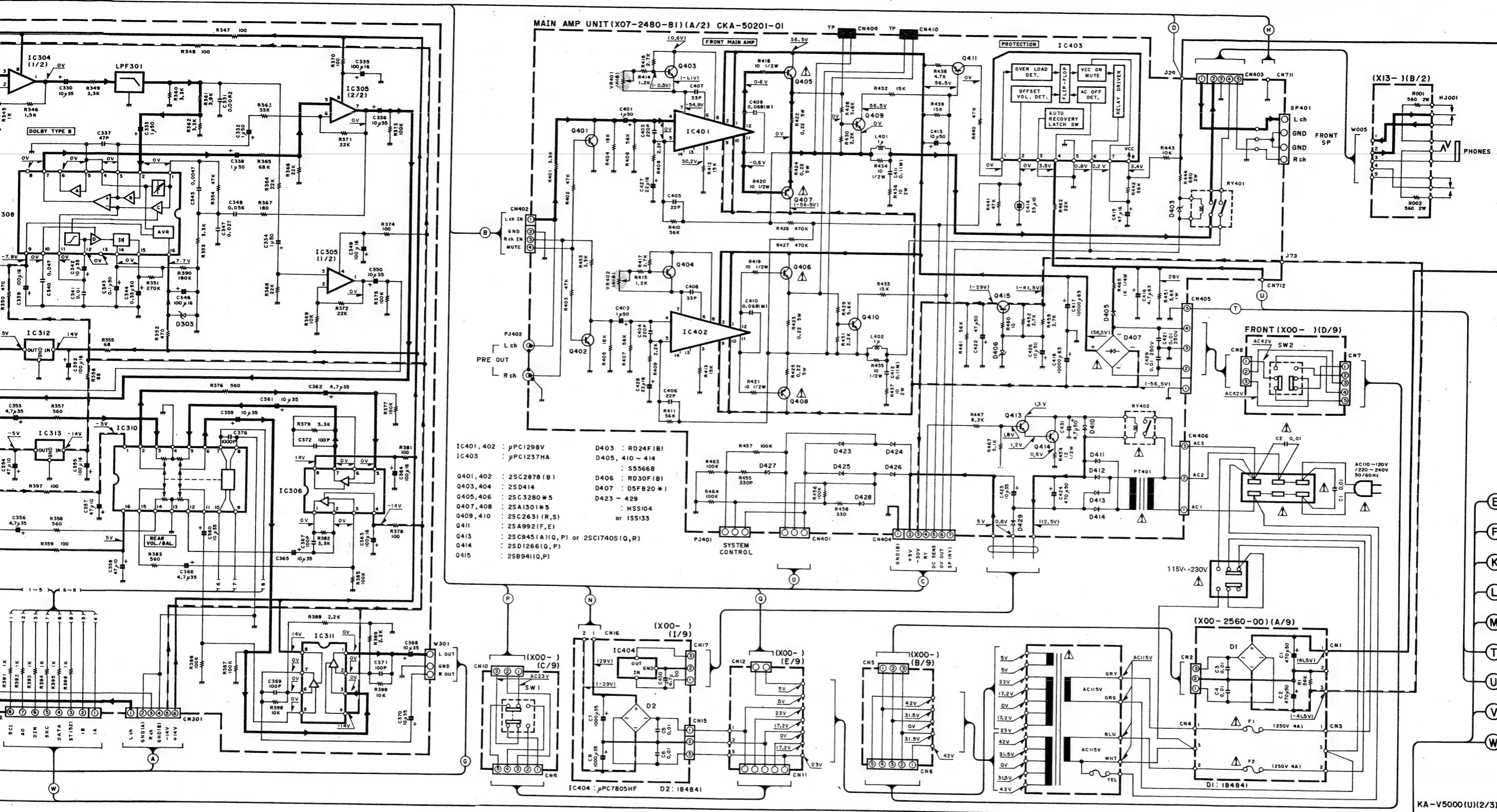
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y08-3660-81

KA-V5000
KENWOOD



DC voltages are as measured with a voltmeter with no signal input. Values slightly due to variations between instruments or/and units.

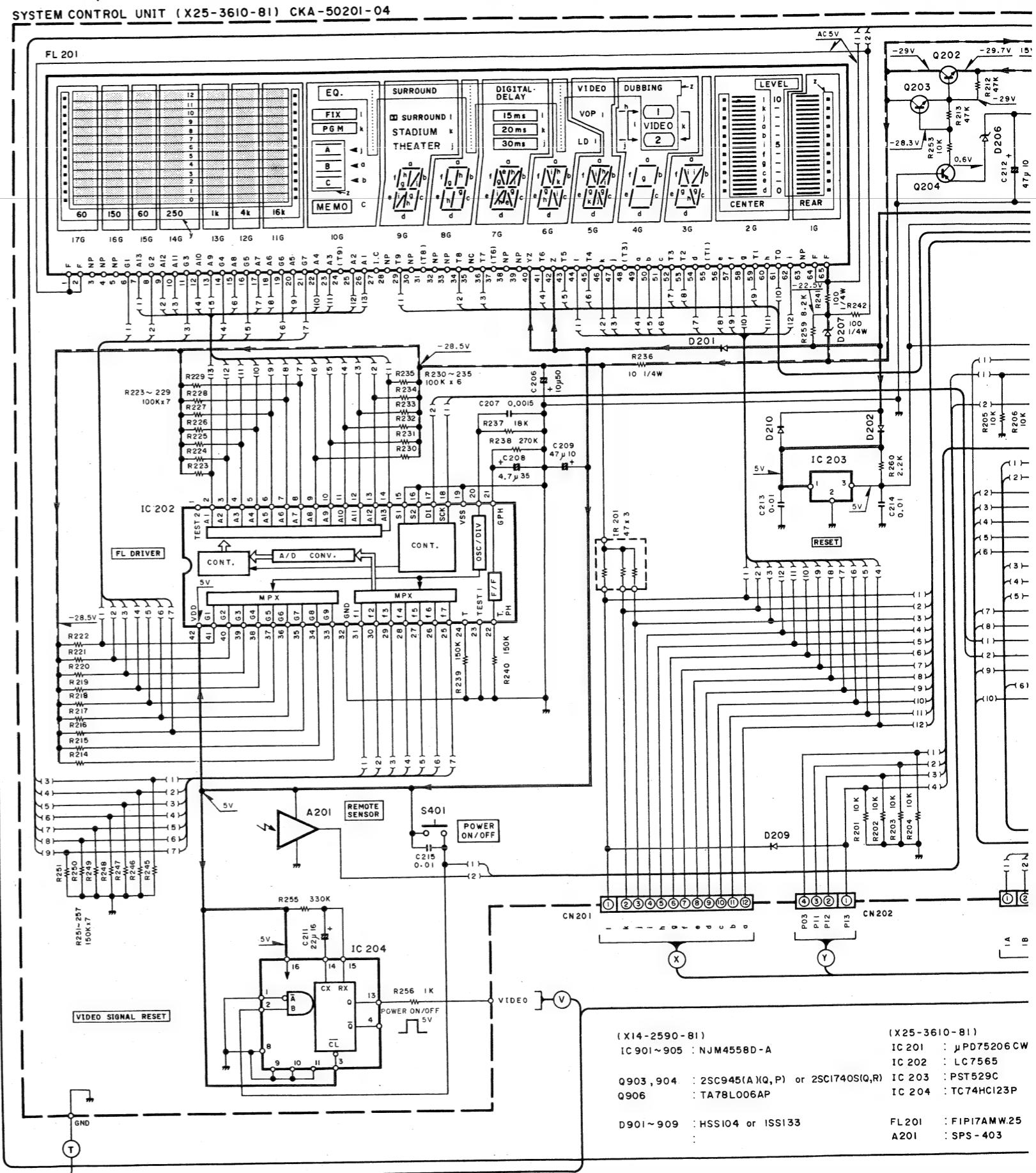
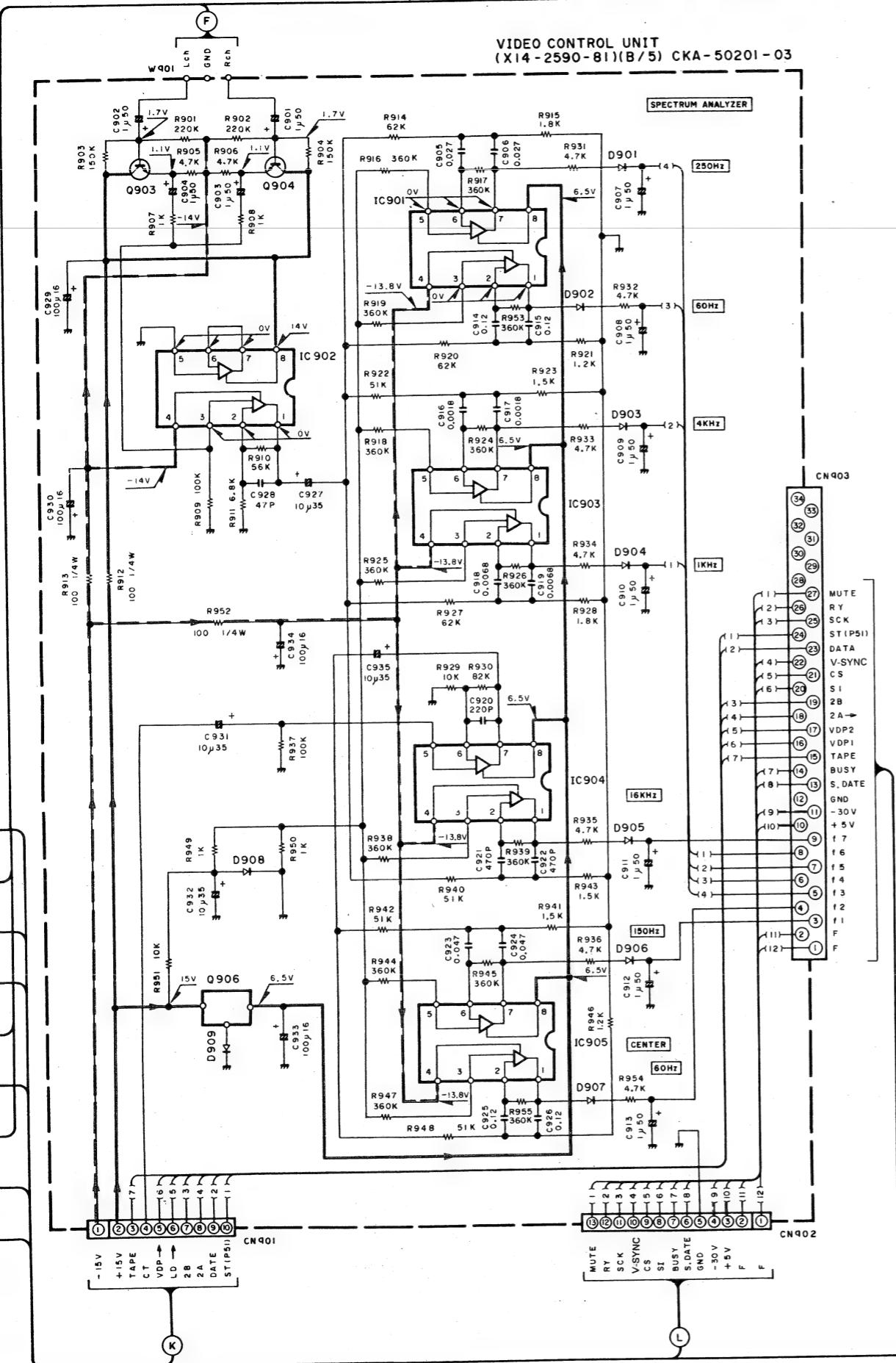


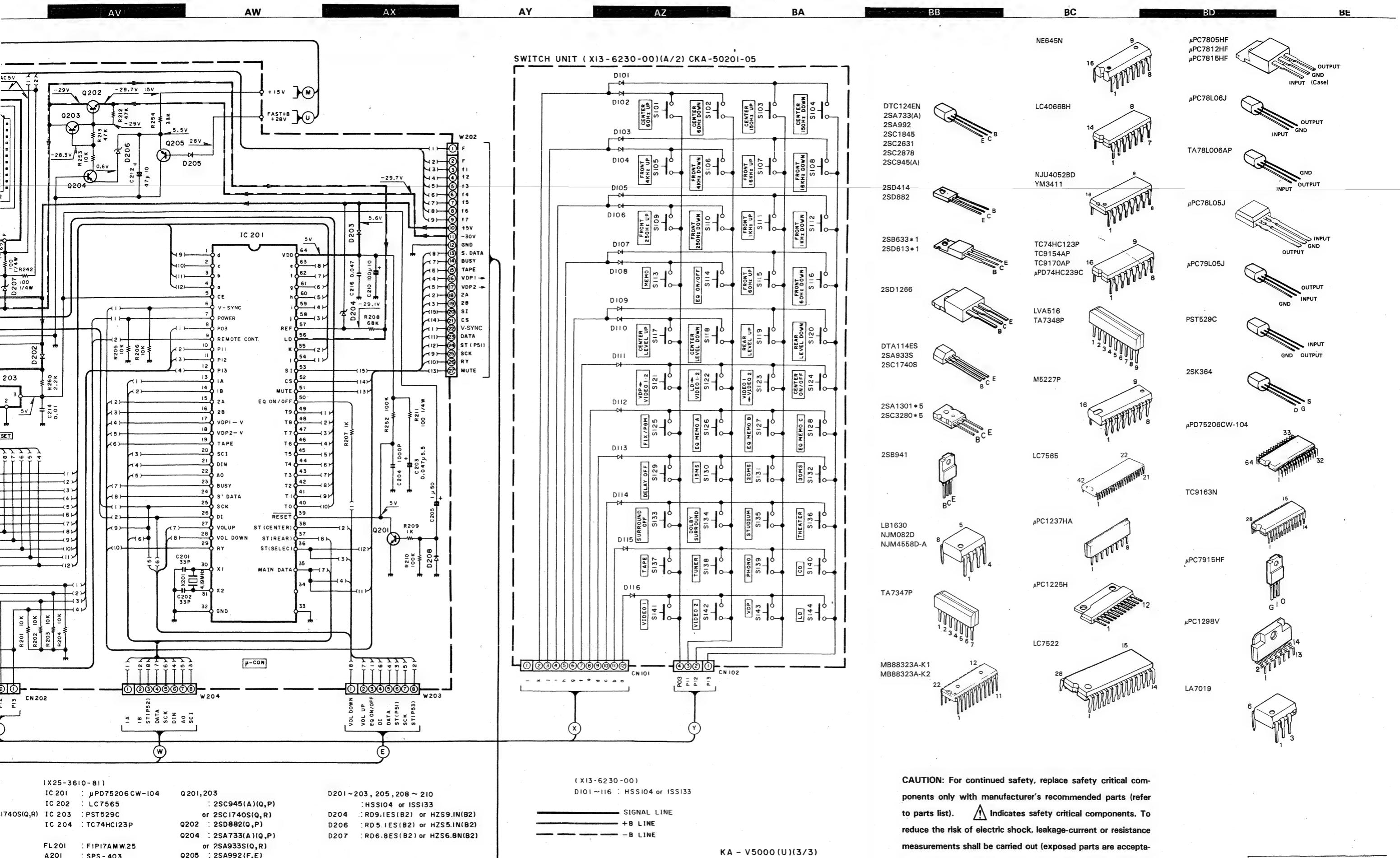
voltages are as measured with a high impedance meter with no signal input. Values may vary due to variations between individual instruments and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. auseinander.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.





(X25-3610-81)

IC 201 : μ PD75206CW-104	Q201,203	D201~203, 205, 208~210
IC 202 : LC7565	2SC945(A)(Q,P)	: HSS104 or ISS133
I740S(Q,R) IC 203 : PST529C	or 2SC1740S(Q,R)	D204 : RD9.1ES(B2) or HZS9.IN(B2)
IC 204 : TC74HC123P	Q202 : 2SD882(Q,P)	D206 : RD5.1ES(B2) or HZS5.IN(B2)
FL201 : F1P17AMW.25	Q204 : 2SA733(A)(Q,P)	D207 : RD6.8ES(B2) or HZS6.8N(B2)
A201 : SPS-403	or 2SA933S(Q,R)	
	Q205 : 2SA992(F,E)	

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

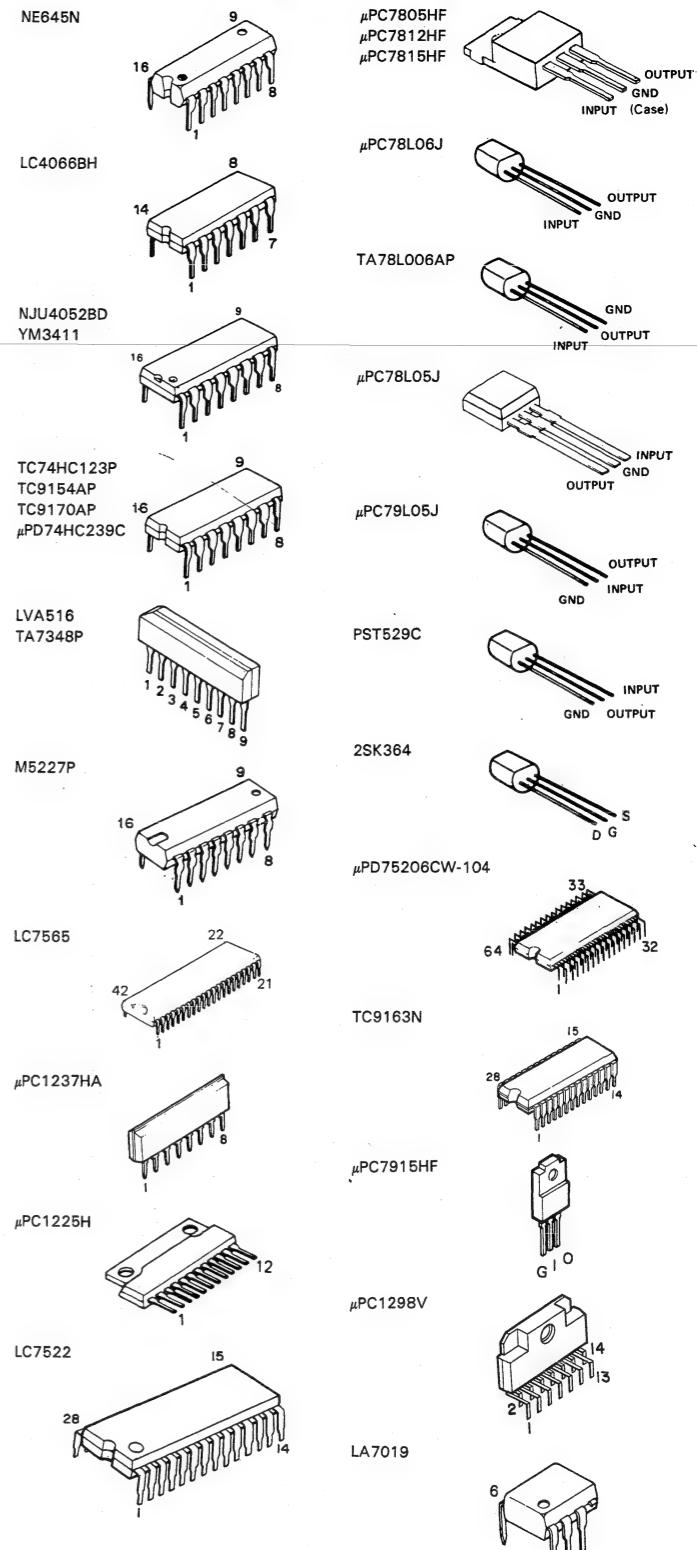
(X13-6230-00)

D101~116 : HSS104 or ISS133

— SIGNAL LINE
— +B LINE
— -B LINE

KA - V5000 (U)(3/3)

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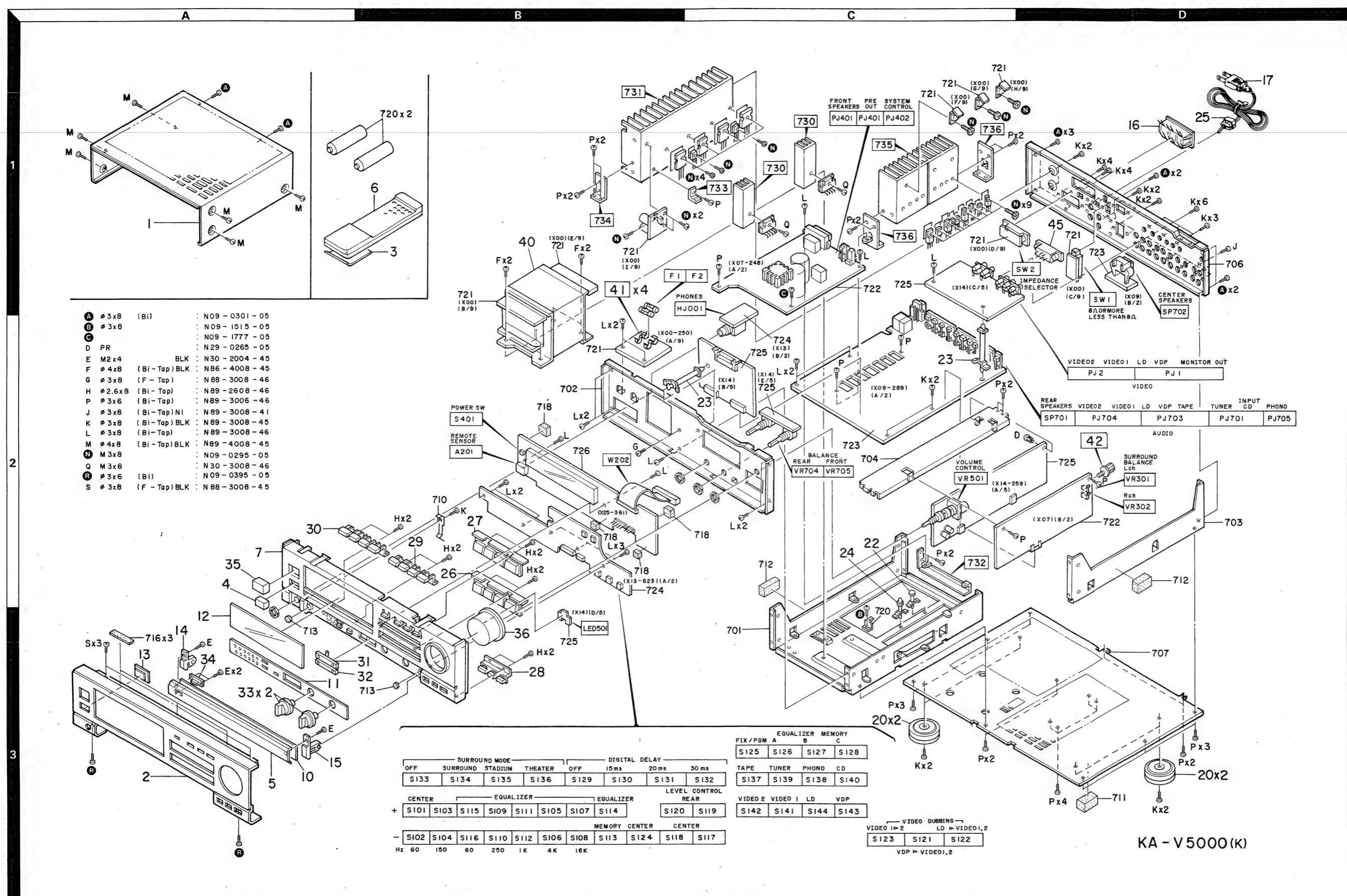


Y08-3660-81

KA-V5000
KENWOOD

KA-V5000 KA-V5000

EXPLODED VIEW



KA-V5000 KA-V5000

PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti- nation 仕向	Re- marks 備考
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KA-V5000

1	1A	*	A01-1773-01	METALLIC CABINET ASSY		
2	3A	*	A20-5830-02	PANEL		
3	1B	*	A09-0073-08	BATTERY COVER(REMOTE CONTROL)		
4	2A	*	A33-0110-04	REFLECTOR		
5	3A	*	A54-0196-02	FRONT DOOR		
6	1A	*	A70-0287-05	REMOTE CONTROLLER ASSY		
7	2A	*	A22-1103-01	SUB PANEL		
10	3A	*	B03-2537-03	DRESSING PLATE		
11	3A	*	B03-2538-03	DRESSING PLATE		
12	3A	*	B10-1022-03	FRONT GLASS		
13	3A	*	B10-1023-04	FRONT GLASS		
			B46-0094-03	WARRANTY CARD		
		*	B46-0095-03	WARRANTY CARD		
		*	B50-9366-00	INSTRUCTION MANUAL		
		*	B58-0223-04	CAUTION CARD (PRE-SET 120V)		
		*	B58-0513-04	CAUTION CARD (PRESET220-240)	U	
			C1-2	C91-0023-05	CERAMIC 0.01UF AC250V	UE
			14	3A	*	D10-2322-04
			15	3A	*	D10-2323-04
			16	1D	*	E03-0068-05
			17	1D	*	E30-0685-05
						AC OUTLET
						AC POWER CORD
						H01-8532-02
						H10-3830-01
						H25-0225-04
						H25-0232-04
			20	3C,3D	*	J02-1002-05
			22	2C	*	J19-3182-05
			23	2C	*	J19-3183-05
			24	2C	*	J19-3184-05
			25	1D	*	J42-0172-05
						FOOT
						UNIT HOLDER
						UNIT HOLDER
						UNIT HOLDER
						POWER CORD BUSHING
			26	2B	*	K27-1976-03
			27	2B	*	K27-1977-03
			28	3B	*	K27-1979-03
			29	2B	*	K27-1980-03
			30	2A	*	K27-1981-03
						KNOB (BUTTON) (VIDEO,LD)
						KNOB (BUTTON) (TAPE,AUX)
						KNOB (BUTTON) (VIDEO DUBBING)
						KNOB (BUTTON) (DIGITAL DELAY)
						KNOB (BUTTON) (SURROUND MODE)
			31	3B	*	K27-1982-03
			32	3B	*	K27-1983-03
			33	3A	*	K27-1984-03
			34	3A	*	K27-1986-04
			35	2A	*	K29-3400-04
						KNOB (BUTTON) (REAR/CENTER)
						KNOB (BUTTON) (LEVEL CONTROL)
						KNOB (BUTTON) (BALANCE)
						KNOB (BUTTON) (PULL OPEN)
						KNOB (POWER)
			36	3B	*	K29-3702-03
						KNOB ASSY (VOLUME CONTROL)
			40	1B	*	L01-8726-05
						POWER TRANSFORMER
A	1A					TAPPIE SCREW (3X8)
B	3C					TAPPING SCREW (3X8)
C	1C					SEMS (TAPPIE SCREW)
D	2D	*				PUSH RIVET
R	3A					
			45	1D		S31-2126-05
						SLIDE SWITCH (POWER TYPE)

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POWER SUPPLY UNIT (X00-2560-81)

C1 ,2			CE04KW1H471M	ELECTRO	470UF	50WV
C3 ,6			CK45FF1H103Z	CERAMIC	0.010UF	Z
C7 ,8			CE04KW1V102M	ELECTRO	1000UF	35WV
F1 ,2	1B,1C		F06-4029-05	FUSE	(250V 4A)	
41	2B		J13-0054-05	FUSE CLIP		
SW1 ,2			S31-2127-05	SLIDE SWITCH (POWER TYPE)		
D1 ,2			1B4B41	DIODE		

MAIN AMPLIFIER UNIT (X07-2480-81)

C301			CE04KW1H010M	ELECTRO	1.0UF	50WV
C302			CC45FSL1H470J	CERAMIC	47PF	J
C303			CE04KW1H010M	ELECTRO	1.0UF	50WV
C304			CC45FSL1H470J	CERAMIC	47PF	J
C305			CE04KW1V100M	ELECTRO	10UF	35WV
C306			CF92FV1H123J	MF	0.012UF	J
C307,308			CC45FSL1H470J	CERAMIC	47PF	J
C309			CF92FV1H222J	MF	2200PF	J
C310			CE04KW1V100M	ELECTRO	10UF	35WV
C311			CC45FSL1H331J	CERAMIC	330PF	J
C312			CF92FV1H153J	MF	0.015UF	J
C313			CF92FV1H222J	MF	2200PF	J
C314			CF92FV1H153J	MF	0.015UF	J
C315			CC45FSL1H331J	CERAMIC	330PF	J
C316			CE04KW1V100M	ELECTRO	10UF	35WV
C317			CF92FV1H152J	MF	1500PF	J
C318			CF92FV1H123J	MF	0.012UF	J
C319			C90-1349-05	NP-ELEC	1UF	50WV
C320,321			CE04KW1C101M	ELECTRO	100UF	16WV
C323			CF92FV1H332J	MF	3300PF	J
C325			CC45FSL1H330D	CERAMIC	33PF	D
C326			CE04KW1H101M	ELECTRO	100UF	50WV
C327			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C328,329			CC45FSL1H220J	CERAMIC	22PF	J
C330			CE04KW1V100M	ELECTRO	10UF	35WV
C331			CF92FV1H822J	MF	8200PF	J
C332-334			CE04KW1H010M	ELECTRO	1.0UF	50WV
C335			CE04KW1C101M	ELECTRO	100UF	16WV
C336			CE04KW1V100M	ELECTRO	10UF	35WV
C337			CC45FSL1H470J	CERAMIC	47PF	J
C338			CE04KW1H010M	ELECTRO	1.0UF	50WV
C339			CE04KW1C101M	ELECTRO	100UF	16WV
C340			CF92FV1H473J	MF	0.047UF	J
C341			CF92FV1H103J	MF	0.010UF	J
C342			CE04KW1V100M	ELECTRO	10UF	35WV
C343			CE04KW1H0			

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C350			CEO4KW1V100M	ELECTRQ	10UF	35WV		
C352			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C353			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C354			CEO4KW1A470M	ELECTRQ	47UF	10WV		
C355			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C356			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C357, 358			CEO4KW1A470M	ELECTRQ	47UF	10WV		
C359-361			CEO4KW1V100M	ELECTRQ	10UF	35WV		
C362			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C363, 364			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C365			CEO4KW1V100M	ELECTRQ	10UF	35WV		
C366			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C367			CC45FSL1H101J	CERAMIC	100PF	J		
C368			CEO4KW1V100M	ELECTRQ	10UF	35WV		
C369			CC45FSL1H101J	CERAMIC	100PF	J		
C370			CEO4KW1V100M	ELECTRQ	10UF	35WV		
C371, 372			CC45FSL1H101J	CERAMIC	100PF	J		
C373			CEO4KW1H100M	ELECTRQ	10UF	50WV		
C374			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C375			CC45FSL1H221J	CERAMIC	220PF	J		
C376			CK45FB1H102K	CERAMIC	1000PF	K		
C401, 402			CEO4KW1H010M	ELECTRQ	1.0UF	50WV		
C403, 404			CC45FSL1H221J	CERAMIC	220PF	J		
C405, 406			CC45FSL1H220J	CERAMIC	22PF	J		
C407, 408			CC45FSL1H330J	CERAMIC	33PF	J		
C409, 410			CF92FV1H683J	MF	0.068UF	J		
C411, 412			CF92FV1H104J	MF	0.10UF	J		
C413		*	CEO4KW1H100M	ELECTRQ	10UF	50WV		
C414		*	C90-1396-05	NP-ELEC	33UF	10WV		
C415		*	CEO4KW1C470M	ELECTRQ	47UF	16WV		
C416		*	CEO4KW1J4R7M	ELECTRQ	4.7UF	63WV		
C417, 418		*	C90-1775-05	ELECTRQ	10000UF	63WV		
C421		*	C91-0023-05	CERAMIC	0.01UF	AC250V		
C422		*	CEO4KW1H470M	ELECTRQ	47UF	50WV		
C423		*	CEO4KW1V100M	ELECTRQ	10UF	35WV		
C424			CEO4KW1H471M	ELECTRQ	470UF	50WV		
C426			CEO4KW1H100M	ELECTRQ	10UF	50WV		
C427, 428			CEO4KW1C220M	ELECTRQ	22UF	16WV		
C429			C91-0023-05	CERAMIC	0.01UF	AC250V		
C430, 431			CEO4KW1H4R7M	ELECTRQ	4.7UF	50WV		
42	2D	*	E21-0021-05	BINDING POST MINIATURE PHONE JACK (SYSTEM C8 PHONE JACK (2P) (PRE OUT) LOCK TERMINAL BOARD (FRONT SP)				
PJ401	1C	*	E11-0195-05					
PJ402	1C	*	E13-0229-05					
SP401	1C	*	E20-0459-05					
L401, 402		*	L39-0188-05	PHASE-COMPENSATION COIL				
LPF301		*	L79-0786-05	LC FILTER				
PT401		*	L01-8742-05	POWER TRANSFORMER				
X301		*	L77-1140-15	CRYSTAL RESONATOR				
N			N09-0295-05	HEXAGON HEAD BOLT (M3X8, +)				
R418-421			RD14DB2H100J	SMALL-RD	10	J	1/2W	
R422-425			R92-0167-05	METAL-PLATE.	0.22	K	5W	
R434, 435			RD14DB2H100J	SMALL-RD	10	J	1/2W	
R436, 437			RS14KB3D100J	FL-PROOF RS	10	J	2W	
R444			RS14KB3D681J	FL-PROOF RS	680	J	2W	

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KA-V5000

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R451		*	RS14KB3A562J	FL-PR00F RS 5.6K	J 1W	
R454		*	RD14DB2H120J	SMALL-RD 12	J 1/2W	
VR301, 302		*	R05-3012-05	POTENTIOMETER		
VR401, 402			R12-1083-05	TRIMMING POT.		
RY401			S51-2078-05	MAGNETIC RELAY		
RY402			S51-1036-05	MAGNETIC RELAY		
D301			HSS104	DIODE		
D301			ISS133	DIODE		
D302, 303			HZS8.2N(B2)	ZENER DIODE		
D302, 303			RD8.2ES(B2)	ZENER DIODE		
D403			RD24F(B)	ZENER DIODE		
D405			S5566B	DIODE		
D406		*	RD30F(B)	ZENER DIODE		
D407			D5FB20*1	DIODE		
D410-414			S5566B	DIODE		
D423-429			HSS104	DIODE		
D423-429			ISS133	DIODE		
IC301-303			NJM4558D-A	IC(NP AMP X2)		
IC304		*	NJM082D	IC(FET NP AMP X2)		
IC305, 306		*	NJM4558D-A	IC(NP AMP X2)		
IC307		*	YM3411	IC(DIGITAL DELAY IC)		
IC308			NE645N	IC(DOLBY B PROCESSOR)		
IC309		*	NJU4052BD	IC(4CH MPX/DE-MPX)		
IC310			TC9154AP	IC(2CH ELECTRONIC VOLUME)		
IC311			NJM4558D-A	IC(NP AMP X2)		
IC312			UPC78L05J	IC(VOLTAGE REGULATOR/ +5V)		
IC313		*	UPC79L05J	IC(VOLTAGE REGULATOR/ -5V)		
IC401, 402		*	UPC1298V	IC(POWER AMP DRIVER)		
IC403			UPC1237HA	IC(POWER AMP)		
IC404			UPC7805HF	IC(VOLTAGE REGULATOR/ +5V)		
Q301, 302			2SA733(A)(Q,P)	TRANSISTOR		
Q301, 302			2SA933S(Q,R)	TRANSISTOR		
Q303, 304			DTC124EN	DIGITAL TRANSISTOR		
Q401, 402			2SC2878(B)	TRANSISTOR		
Q403, 404			2SD414	TRANSISTOR		
Q405, 406			2SC3280*5	TRANSISTOR		
Q407, 408			2SA1301*5	TRANSISTOR		
Q409, 410			2SC2631(R,S)	TRANSISTOR		
Q411			2SA992(F,E)	TRANSISTOR		
Q413			2SC1740S(Q,R)	TRANSISTOR		
Q413			2SC945(A)(Q,P)	TRANSISTOR		
Q414			2SD1266(Q,P)	TRANSISTOR		
Q415			2SB941(Q,P)	TRANSISTOR		

AUDIO UNIT (X09-2890-81)

C701-704		CC45FSL1H221J	CERAMIC	220PF	J	
C707-716		CC45FSL1H221J	CERAMIC	220PF	J	
C717-722		CE04KW1V100M	ELECTRO	10UF	35WV	
C729, 730		CK45F1H473Z	CERAMIC	0.047UF	Z	
C731, 732		CE04KW1V4R7M	ELECTRO	4.7UF	35WV	
C733, 734		CE04KW1V100M	ELECTRO	10UF	35WV	
C735-737		CE04KW1C101M	ELECTRO	100UF	16WV	
C738		CF92FV1H104J	MF	0.10UF	J	
C739, 740		CF92FV1H223J	MF	0.022UF	J	
C741, 742		CE04KW1V4R7M	ELECTRO	4.7UF	35WV	

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C743,744			CC45FSL1H221J	CERAMIC	220PF	J		
C745,746			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C747,748			CC45FSL1H060D	CERAMIC	6.0PF	D		
C749,750			CC45FSL1H150J	CERAMIC	15PF	J		
C751,752			CF92FV1H473J	MF	0.047UF	J		
C753,754			CF92FV1H104J	MF	0.10UF	J		
C755			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C756			CC45FSL1H150J	CERAMIC	15PF	J		
C757			CC45FSL1H060D	CERAMIC	6.0PF	D		
C758			CF92FV1H473J	MF	0.047UF	J		
C759			CF92FV1H104J	MF	0.10UF	J		
C760			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C761			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C762,763			CC45FSL1H221J	CERAMIC	220PF	J		
C764,765			CEO4KW1C470M	ELECTRQ	47UF	16WV		
C766,767			CF92FV1H562J	MF	5600PF	J		
C768,769			CF92FV1H152J	MF	1500PF	J		
C770,771			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C772,773			CEO4KW1C101M	ELECTRQ	100UF	16WV		
C774			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C775-778			CEO4KW1H010M	ELECTRQ	1.0UF	50WV		
C781-790			CEO4KW1H010M	ELECTRQ	1.0UF	50WV		
C794			CF92FV1H223J	MF	0.022UF	J		
C796			CF92FV1H683J	MF	0.068UF	J		
C797			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C798			CEO4KW1C471M	ELECTRQ	470UF	16WV		
C799,800			CEO4KW1E221M	ELECTRQ	220UF	25WV		
C801,802		*	C90-1776-05	ELECTRQ	4700UF	35WV		
C803,804			CF92FV1H104J	MF	0.10UF	J		
C805			CEO4KW1V4R7M	ELECTRQ	4.7UF	35WV		
C806			CC45FSL1H221J	CERAMIC	220PF	J		
C808,809			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C810			CF92FV1H333J	MF	0.033UF	J		
C811-813			CK45FB1H102K	CERAMIC	1000PF	K		
C814-816			CEO4KW1H4R7M	ELECTRQ	4.7UF	50WV		
C817,818			CK45FB1H102K	CERAMIC	1000PF	K		
PJ701	2D		E13-0497-05	PHONE JACK	(4P)	TUNER,CD		
PJ703,704	2D		E13-0814-05	PHONE JACK	(8P)	TAPE,VIDEN		
PJ705	2D		E13-0229-05	PHONE JACK	(2P)	PHONE		
SP701	2D		E20-0475-05	LOCK TERMINAL BOARD(REAR SP)				
SP702	2D	*	E20-0236-05	LOCK TERMINAL BOARD(CENTER SP)				
L701-703		*	L39-0188-05	PHASE-COMPENSATION COIL				
N			N09-0295-05	HEXAGON HEAD BOLT(M3X8, +)				
R755,756			RD14DB2H151J	SMALL-RD	150	J	1/2W	
R799-802			R92-0167-05	METAL-PLATE	0.22	K	5W	
R809-812			RD14DB2H100J	SMALL-RD	10	J	1/2W	
R821			RS14KB3D681J	FL-PROOF RS	680	J	2W	
R822,823			RS14KB3D561J	FL-PROOF RS	560	J	2W	
R824			RS14KB3D681J	FL-PROOF RS	680	J	2W	
R838,839			R92-0167-05	METAL-PLATE	0.22	K	5W	
R842,843			RD14DB2H100J	SMALL-RD	10	J	1/2W	
R884			RS14KB3D681J	FL-PROOF RS	680	J	2W	
VR701-703			R12-1083-05	TRIMMING PNT.				

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RY701,702			S51-2078-05	MAGNETIC RELAY		
D701,702			HZS7.5S(B)	ZENER DIODE		
D701,702			RD7.5JS(B)	ZENER DIODE		
D703			HZS5.1N(B2)	ZENER DIODE		
D703			RDS.1ES(B2)	ZENER DIODE		
D704-707			HSS104	DIODE		
D704-707			1SS133	DIODE		
D710			RD24F(B)	ZENER DIODE		
D712			S4VB20	DIODE		
D713,714			HSS104	DIODE		
D713,714			1SS133	DIODE		
D715			RD24F(B)	ZENER DIODE		
IC701			TC9163N	IC(BILATERAL SWITCH X16)		
IC702-704			LC4066BH	IC(BILATERAL SWITCH X4)		
IC705			NJM4558D-A	IC(OP AMP X2)		
IC706		*	UPD74HC239C	IC(2-4 X2 LINE DECODER/DE-MPX)		
IC707,708		*	UPC1225H	IC(POWER AMP DRIVER)		
IC709		*	UPC7812HF	IC(VOLTAGE REGULATOR/ +12V)		
IC710		*	UPC7815HF	IC(VOLTAGE REGULATOR/ +15V)		
IC711		*	UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
IC712		*	UPC1225H	IC(POWER AMP DRIVER)		
IC713,714			NJM4558D-A	IC(OP AMP X2)		
IC716-721			NJM4558D-A	IC(OP AMP X2)		
Q701			DTA114ES	DIGITAL TRANSISTOR		
Q702			2SA733(A)(Q,P)	TRANSISTOR		
Q702			2SA933S(Q,R)	TRANSISTOR		
Q703-708			DTC124EN	DIGITAL TRANSISTOR		
Q709			DTA114ES	DIGITAL TRANSISTOR		
Q710			2SA733(A)(Q,P)	TRANSISTOR		
Q710			2SA933S(Q,R)	TRANSISTOR		
Q711,712			2SC2878(B)	TRANSISTOR		
Q713,714			2SD414	TRANSISTOR		
Q715,716			2SD613*1	TRANSISTOR		
Q717,718			2SB633*1	TRANSISTOR		
Q719,720			2SC1845(F,E)	TRANSISTOR		
Q721			2SA733(A)(Q,P)	TRANSISTOR		
Q722			2SA933S(Q,R)	TRANSISTOR		
Q723			DTC124EN	DIGITAL TRANSISTOR		
Q724			2SC2878(B)	TRANSISTOR		
Q725			2SD414	TRANSISTOR		
Q726			2SD613*1	TRANSISTOR		
Q727			2SB633*1	TRANSISTOR		
Q727			2SC1845(F,E)	TRANSISTOR		
SWITCH UNIT (X13-6230-00)						
HJ001	1B,1C	*	E11-0196-05	PHONE JACK		
R1,2			RS14DB3D561J	FL-PROOF RS 560 J 2W		
S101-144			S40-1064-05	PUSH SWITCH		
D101-116			HSS104	DIODE		
D101-116			1SS133	DIODE		
VIDEO CONTROL UNIT (X14-2590-81)						
LED501		*	B30-1280-05	LED		

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C1			CEO4KW1C101M	ELECTRO	100UF	16WV		
C2			CEO4KW1A471M	ELECTRO	470UF	10WV		
C3			CF92FV1H103J	MF	0.010UF	J		
C4			CEO4KW1C470M	ELECTRO	47UF	16WV		
C5			CEO4KW1A471M	ELECTRO	470UF	10WV		
C6			CEO4KW1C331M	ELECTRO	330UF	16WV		
C7			CEO4KW1C470M	ELECTRO	47UF	16WV		
C9			CEO4KW1A471M	ELECTRO	470UF	10WV		
C10			CEO4KW1C470M	ELECTRO	47UF	16WV		
C11			CEO4KW1A471M	ELECTRO	470UF	10WV		
C12			CEO4KW1C470M	ELECTRO	47UF	16WV		
C13	-15		CF92FV1H103J	MF	0.010UF	J		
C16			CEO4KW1C101M	ELECTRO	100UF	16WV		
C17	-18		CF92FV1H103J	MF	0.010UF	J		
C19			CEO4KW1C470M	ELECTRO	47UF	16WV		
C20			CF92FV1H103J	MF	0.010UF	J		
C21	-22		CEO4KW1C470M	ELECTRO	47UF	16WV		
C23	-25		CEO4KW1C101M	ELECTRO	100UF	16WV		
C26			CEO4KW1C470M	ELECTRO	47UF	16WV		
C27			CEO4KW1V100M	ELECTRO	10UF	35WV		
C28	-29		CC45FSL1H330J	CERAMIC	33PF	J		
C30	-31		CC45FCH1H270J	CERAMIC	27PF	J		
C32			CEO4KW1C101M	ELECTRO	100UF	16WV		
C33			CC09FS1H561J	POLYSTY	560PF	J		
C34			CF92FV1H104J	MF	0.10UF	J		
C35			CEO4KW1H010M	ELECTRO	1.0UF	50WV		
C36			CF92FV1H223J	MF	0.022UF	J		
C37			CF92FV1H332J	MF	3300PF	J		
C38			CC09FS1H561J	POLYSTY	560PF	J		
C39			CEO4KW1A471M	ELECTRO	470UF	10WV		
C40			CEO4KW1H01R1M	ELECTRO	0.1UF	50WV		
C41			CF92FV1H103J	MF	0.010UF	J		
C42			CEO4KW1V4R7M	ELECTRO	4.7UF	35WV		
C43			CK45FB1H102K	CERAMIC	1000PF	K		
C44			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C45			CC45FSL1H100D	CERAMIC	10PF	D		
C501,502			CEO4KW1H010M	ELECTRO	1.0UF	50WV		
C503-506			CEO4KW1V100M	ELECTRO	10UF	35WV		
C507			CEO4KW1C101M	ELECTRO	100UF	16WV		
C508			CEO4KW1E101M	ELECTRO	100UF	25WV		
C509,510			CEO4KW1C101M	ELECTRO	100UF	16WV		
C511,512			CEO4KW1H3R3M	ELECTRO	3.3UF	50WV		
C513,514			CF92FV1H823J	MF	0.082UF	J		
C515,516			CEO4KW1HR47M	ELECTRO	0.47UF	50WV		
C517,518			CEO4KW1HR33M	ELECTRO	0.33UF	50WV		
C519,520			CF92FV1H223J	MF	0.022UF	J		
C521,522			CF92FV1H184J	MF	0.18UF	J		
C523,524			CF92FV1H472J	MF	4700PF	J		
C525,526			CF92FV1H473J	MF	0.047UF	J		
C527,528			CF92FV1H122J	MF	1200PF	J		
C529,530			CC45FSL1H101J	CERAMIC	100PF	J		
C531,532			CF92FV1H123J	MF	0.012UF	J		
C533-540			CEO4KW1V100M	ELECTRO	10UF	35WV		
C541,542			CC45FSL1H331J	CERAMIC	330PF	J		
C543,544			CEO4KW1C101M	ELECTRO	100UF	16WV		

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C545,546			CEO4KW1V100M	ELECTRO	10UF	35WV		
C547,548			CEO4KW1V4R7M	ELECTRO	4.7UF	35WV		
C549			CC45FSL1H101J	CERAMIC	100PF	J		
C560			CC45FSL1H101J	CERAMIC	100PF	J		
C561,562			CEO4KW1C101M	ELECTRO	100UF	16WV		
C563,564			CEO4KW1V100M	ELECTRO	10UF	35WV		
C565			CEO4KW1C101M	ELECTRO	100UF	16WV		
C566-569			CEO4KW1C220M	ELECTRO	22UF	16WV		
C570,571			CEO4KW1C101M	ELECTRO	100UF	16WV		
C572			CF92FV1H224J	MF	0.22UF	J		
C573			CEO4KW1H010M	ELECTRO	1.0UF	50WV		
C574			CF92FV1H333J	MF	0.033UF	J		
C575			CF92FV1H823J	MF	0.082UF	J		
C576			CEO4KW1H2R2M	ELECTRO	2.2UF	50WV		
C577,578			CEO4KW1C101M	ELECTRO	100UF	16WV		
C579			CK45FB1H821K	CERAMIC	820PF	K		
C580,581			CEO4KW1V100M	ELECTRO	10UF	35WV		
C583-585			CEO4KW1V100M	ELECTRO	10UF	35WV		
C589			CF92FV1H103J	MF	0.010UF	J		
C590			CEO4KW1V100M	ELECTRO	10UF	35WV		
C591			CF92FV1H102J	MF	1000PF	J		
C592			CF92FV1H223J	MF	0.022UF	J		
C593			CEO4KW1C101M	ELECTRO	100UF	16WV		
C594			CEO4KW1V100M	ELECTRO	10UF	35WV		
C595			CF92FV1H223J	MF	0.022UF	J		
C596			CEO4KW1C101M	ELECTRO	100UF	16WV		
C597			CEO4KW1V100M	ELECTRO	10UF	35WV		
C598			CF92FV1H473J	MF	0.047UF	J		
C599-602			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C901-904			CEO4KW1H010M	ELECTRO	1.0UF	50WV		
C905,906			CF92FV1H273J	MF	0.027UF	J		
C907-913			CEO4KW1H010M	ELECTRO	1.0UF	50WV		
C914,915			CF92FV1H124J	MF	0.12UF	J		
C916,917			CF92FV1H182J	MF	1800PF	J		
C918,919			CF92FV1H682J	MF	6800PF	J		
C920			CC45FSL1H221J	CERAMIC	220PF	J		
C921,922			CK45FB1H471K	CERAMIC	470PF	K		
C923,924			CF92FV1H473J	MF	0.047UF	J		
C925,926			CF92FV1H124J	MF	0.12UF	J		
C927			CEO4KW1V100M	ELECTRO	10UF	35WV		
C928			CC45FSL1H470J	CERAMIC	47PF	J		
C929,930			CEO4KW1C101M	ELECTRO	100UF	16WV		
C931,932			CEO4KW1V100M	ELECTRO	10UF	35WV		
C933,934			CEO4KW1C101M	ELECTRO	100UF	16WV		
C935			CEO4KW1V100M	ELECTRO	10UF	35WV		
PJ1		*	E13-0478-05	PHONE JACK				
PJ2		*	E13-0309-05	PHONE JACK				
L1		*	L40-1501-17	SMALL FIXED INDUCTOR(15UH,K)				
X1		*	L77-1131-05	CRYSTAL RESONATOR				
IP501,502		*	R90-0834-05	MULTIPLE RESISTOR(1.0M X7)				
R565		*	RS14KB3A100J	FL-PROOF RS 10	J 1W			
VR1		*	R12-3126-05	TRIMMING POT.				
VR501		*	R29-4017-05	POTENTIOMETER				
VR704,705		*	R05-4007-05	POTENTIOMETER				

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D1			HSS104	DIODE		
D1			1SS133	DIODE		
D2			HZS6.2N(B2)	ZENER DIODE		
D2			RD6.2ES(B2)	ZENER DIODE		
D3 -6			HSS104	DIODE		
D3 -6			1SS133	DIODE		
D7			HZS6.2N(B2)	ZENER DIODE		
D7			RD6.2ES(B2)	ZENER DIODE		
D8			HZS5.1N(B2)	ZENER DIODE		
D8			RD5.1ES(B2)	ZENER DIODE		
D9 ,10			HSS104	DIODE		
D9 ,10			1SS133	DIODE		
D11			HZS5.1N(B2)	ZENER DIODE		
D11			RD5.1ES(B2)	ZENER DIODE		
D12			HSS104	DIODE		
D501,502			1SS133	DIODE		
D501,502			HZS6.2N(B2)	ZENER DIODE		
D503,504			RD6.2ES(B2)	ZENER DIODE		
D503,504			HZS6.8N(B2)	ZENER DIODE		
D506-509			RD6.8ES(B2)	ZENER DIODE		
D506-509			HSS104	DIODE		
D510,511			1SS133	DIODE		
D510,511			HZS6.2N(B2)	ZENER DIODE		
D901-909			RD6.2ES(B2)	ZENER DIODE		
D901-909			HSS104	DIODE		
IC1	*		1SS133	DIODE		
IC2	*		TA7348P	IC(3-INPUT SWITCH)		
IC3	*		TA7347P	IC(2-INPUT SWITCH)		
IC4	*		TA7348P	IC(3-INPUT SWITCH)		
IC4	*		LA7019	IC(ELECTRONIC SWITCH)		
IC5	*		MB88323A-K1	IC(DISPLAY CONTROLLER)		
IC5	*		MB88323A-K2	IC(DISPLAY CONTROLLER)		
IC6	*		LVA516	IC(SYNC SEPARATION)		
IC501,502			MS227P	IC(5CH GRAPHIC EQUALIZER)		
IC503			LC7522	IC(7CH GRAPHIC EQUALIZER)		
IC504			LC4066BH	IC(BILATERAL SWITCH X4)		
IC505			LB1630	IC(MOTOR DRIVER)		
IC506-508			NJM4558D-A	IC(OP AMP X2)		
IC509			TC9170AP	IC(GRAPHIC EQUALIZER)		
IC510			TC9154AP	IC(2CH ELECTRONIC VOLUME)		
IC511			NJM4558D-A	IC(OP AMP X2)		
IC512	*		UPC78L06J	IC(VOLTAGE REGULATOR/ +6V)		
IC901-905			NJM4558D-A	IC(OP AMP X2)		
Q1 -4			2SC1740S(Q,R)	TRANSISTOR		
Q1 -4			2SC945(A)(Q,P)	TRANSISTOR		
Q5			2SA733(A)(Q,P)	TRANSISTOR		
Q5			2SA933S(Q,R)	TRANSISTOR		
Q6 -10			2SC1740S(Q,R)	TRANSISTER		
Q6 -10			2SC945(A)(Q,P)	TRANSISTOR		
Q11			2SA733(A)(Q,P)	TRANSISTOR		
Q11			2SA933S(Q,R)	TRANSISTOR		
Q12 ,13			2SC1740S(Q,R)	TRANSISTER		
Q12 ,13			2SC945(A)(Q,P)	TRANSISTOR		
Q14			2SK364(GR,BL)	FET		
Q15			2SC1740S(Q,R)	TRANSISTER		

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Q15 Q501, 502 Q501, 502 Q503 Q503			2SC945(A)(Q,P) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SA733(A)(Q,P) 2SA933S(Q,R)	TRANSISTOR TRANSISTER TRANSISTOR TRANSISTOR TRANSISTOR		
Q504, 505 Q506, 507 Q506, 507 Q903, 904 Q903, 904			DTC124EN 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC1740S(Q,R) 2SC945(A)(Q,P)	DIGITAL TRANSISTOR TRANSISTER TRANSISTOR TRANSISTER TRANSISTOR		
Q906			TA78L006AP	IC(VOLTAGE REGULATOR/ +6V)		
DISPLAY UNIT (X25-3610-81)						
C201, 202 C203 C204 C205 C206		*	CC45FSL1H330J C91-1404-05 CK45FB1H102K CEO4DW1H010M CEO4DW1H100M	CERAMIC ELECTRO 0.047UF CERAMIC 1000PF ELECTRO 1.0UF ELECTRO 10UF	33PF J 5.5WV K 50WV 50WV	
C207 C208 C209 C210 C211		*	CF92FV1H152J CEO4DW1V4R7M CEO4DW1A470M CEO4DW1A101M CEO4DW1C220M	MF 1500PF ELECTRO 4.7UF ELECTRO 47UF ELECTRO 100UF ELECTRO 22UF	35WV 10WV 10WV 16WV	
C212 C213-215 C216			CEO4DW1A470M CK45FF1H103Z CK45FF1H473Z	ELECTRO 4.7UF CERAMIC 0.010UF CERAMIC 0.047UF	10WV Z Z	
X201			L77-1118-05	CRYSTAL RESONATOR		
IR201			R90-0202-05	MULTI-COMP 47KX4	J 1/6W	
S401			S40-1064-05	PUSH SWITCH		
A201 D201-203 D201-203 D204 D204		*	SPS-403 HSS104 1SS133 H2S9.1N(B2) RD9.1ES(B2)	IC(REMOTE SENSOR) DIODE DIODE ZENER DIODE ZENER DIODE		
D205 D205 D206 D206 D207			HSS104 1SS133 H2S5.1N(B2) RD5.1ES(B2) H2S6.8N(B2)	DIODE DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D207 D208-210 D208-210 FL201 IC201		*	RD6.8ES(B2) HSS104 1SS133 FIP17AMW25 UPD75206CW-104	ZENER DIODE DIODE DIODE FLUORESCENT INDICATOR TUBE IC(MICROPROCESSOR)		
IC202 IC203 IC204 Q201 Q201			LC7565 PST529C TC74HC123P 2SC1740S(Q,R) 2SC945(A)(Q,P)	IC(GRAPHIC EQ FL DISPLAY DR) IC(SYSTEM RESET) IC(DUAL MONO MULTI) TRANSISTOR TRANSISTOR		
Q202 Q203 Q203 Q204			2SD882(Q,P) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SA733(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		

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Q204			2SA933S(Q,R)	TRANSISTOR		
Q205			2SA992(F,E)	TRANSISTOR		

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SPECIFICATIONS

<Audio Section: Front>

Power Output

70 watts per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.09% total harmonic distortion.

Total harmonic distortion

LINE input to speaker output

(20 Hz to 20,000 Hz) ... 0.09% at 70 W into 8 ohms
(1 kHz) 0.05% at 70 W into 8 ohms

Frequency response 10 Hz to 100 kHz/ +0 dB, -3 dB

PHONO

(RIAA standard curve) .. 20 Hz to 20 kHz/ ±0.3 dB

Input sensitivity/impedance

PHONO (MM) 2.5 mV 47 kohms
Except PHONO 150 mV 47 kohms

Signal to noise ratio (IHF-A)

PHONO (MM) 70 dB (2.5 mV)
Except PHONO 90 dB (150 mV)

Output level/impedance

TAPE REC (pin) 150 mV 2.2 kohms
PRE OUT 1 V 1 kohm

Graphic equalizer

Center frequency 60 Hz, 250 Hz, 1 kHz, 4 kHz,
16 kHz

Control range ± 12 dB

<Audio Section: Center>

Power Output

20 watts at 8 ohms from 20 Hz to 100 Hz.

Graphic equalizer

Center frequency 60 Hz, 150 Hz
Control range ± 12 dB

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the PX (U) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

<Audio Section: Rear>

Power Output

20 watts per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20,000 Hz.

<Video Section>

Input sensitivity/

impedance 1 Vp-p at 75 ohms

Output level/impedance

REC OUT 1 Vp-p at 75 ohms

Frequency Response*

(Monitor out) 5 Hz to 6 MHz/ +0 dB, -3 dB

Signal to noise ratio

(Monitor out) 65 dB

<General>

Power consumption 250 W

Dimensions W: 440 mm (17-5/16")

H: 127 mm (5")

D: 413 mm (16-1/4")

Weight (Net) 11 kg (24.2 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

KENWOOD CORPORATION

Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION

2201 East Dominguez Street, Long Beach, CA 90810;

550 Clark Drive, Mount Olive, NJ 07828, U.S.A.

KENWOOD ELECTRONICS CANADA INC.

P.O. Box 1075 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2

KENWOOD ELECTRONICS BENELUX N.V.

Mechelsesteenweg 418 B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rembrucker-Str. 15, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A.

Hi-Fi·VIDEO·CAR Hi-Fi

13, Boulevard Ney, 75018 Paris, France

TRIO-KENWOOD U.K. LTD.

17 Bristol Road, The Metropolitan Centre, Greenford, Middx. UB6 8UP England

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD.

4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD & LEE ELECTRONICS, LTD.

Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central, Hong Kong